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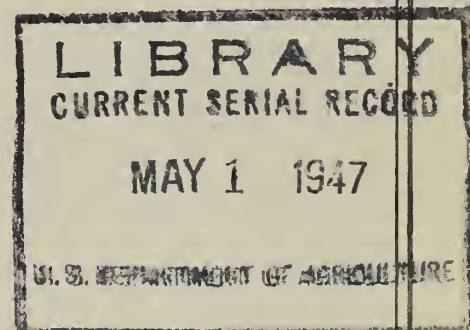
FARM CREDIT ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

FROZEN FOOD LOCKER PLANTS

Location, Capacity, Rates, And Use

JANUARY 1, 1946

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CONTENTS

	Page
Summary.....	1
Plants reporting, locker capacity, and use of plants.....	1
Locker capacity of plants.....	1
Lockers installed.....	4
Lockers rented.....	5
Percentage of capacity rented.....	6
Specified locker capacity of plants.....	6
Affiliation of plants.....	8
Types of affiliation.....	8
Affiliation and capacity.....	9
Ownership.....	9
Ownership by regions.....	10
Year of plant opening.....	12
Ownership and capacity.....	13
Patronage.....	15
Patronage and affiliation.....	16
Patronage and population of town.....	16
Population of town.....	18
Population and year of opening.....	18
Plant location and size of town.....	20
Locker capacity and size of town.....	20
Processing and slaughtering services.....	21
Meat chilling, cutting, wrapping, freezing, and grinding.....	21
Curing.....	22
Smoking.....	22
Lard rendering.....	24
Slaughtering.....	24
Poultry slaughtering and dressing.....	26
Locker rental and processing rates.....	26
Locker rental rates.....	28
Rates for cutting, wrapping, and freezing.....	28
Grinding.....	30
Curing.....	30
Smoking.....	30
Rendering lard.....	30
Processing fish.....	32
Rates and ownership.....	32
Killing and processing poultry.....	32
Processing only.....	34
Fruits and vegetables.....	34
Products processed per locker rented.....	36
Trends in the industry.....	40
Home units.....	40
City plants.....	40
Added services.....	40

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FARM CREDIT ADMINISTRATION

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SUMMARY

Since the national survey of 1943 by the Farm Credit Administration, the number of locker plants increased from 4,600 to 7,000 as of January 1, 1946, and to 8,000 in the next 6 months.

Estimates based on this study show that these 8,000 plants were serving approximately 3,300,000 families, or over 13 million persons, on July 1, 1946. These plants have an estimated combined capacity of some 4 million lockers and store about 1.4 billion pounds of food a year, of which some 90 percent is meat and poultry.

PLANTS REPORTING, CAPACITY, AND PATRONAGE

This report is based on data obtained from 2,882 usable schedules returned by locker-plant operators. This sample represents over 40 percent of the 7,000 plants in operation on January 1, 1946.

Though the majority of the plants reporting were in the North Central and Pacific coast areas, the locker-plant movement is expanding rapidly toward the East and the South.

Average plant capacity; that is, the number of lockers a plant can hold, increased from 328 lockers January 1, 1941, to 500 January 1, 1946, or 52 percent. Plants in the North Atlantic States were larger and those in the North Central area smaller, on the average.

Likewise, the number of patrons per plant increased from 285 on January 1, 1943, to 414 on January 1, 1946, a gain of 45 percent.

Percentage of capacity rented was 99 percent of the lockers installed January 1, 1946, compared with 92 percent for 1943. Nearly all plants were fully rented and most of them had waiting lists.

AFFILIATION AND CAPACITY

As compared with the 1943 survey, plants reporting affiliation with retail stores declined from 41 to 35 percent; those affiliated with ice plants remained about the same, at 16 percent; those affiliated with dairy plants dropped from 14 to 10 percent; and nonaffiliated plants increased from 18 to 29 percent.

OWNERSHIP AND CAPACITY

Individual ownership of plants dropped from 55 percent January 1, 1943, to 49 percent for 1946. Partnerships increased from 18 to 22 percent and cooperative plants from 10 to 13. Corporation ownership showed a slight decline, from 17 to 16 percent.

Largest plants, averaging some 728 lockers capacity, were owned by corporations; smallest ones, averaging 429 and 422 lockers, respectively, were owned by individuals and by cooperatives.

FARM AND NONFARM PATRONAGE

The proportion of lockers rented by farmers has remained about the same for the past 5 years. In 1946, farmers represented 73 percent of the total patrons. Farm patronage was highest (80 percent) in towns of 5,000 or less and lowest (57 percent) in towns and cities of 10,000 or more.

PROCESSING SERVICES

Eighty-seven percent of all plants reporting customarily chill, cut, wrap, grind, and freeze meat for patrons. This percentage varied from 76 percent in the West to 95 in the South Atlantic States; representing substantial increases in such services, particularly in the West and in the North Atlantic States.

Curing of pork was reported by 42 percent of the plants, compared with 39 percent in 1943. Plants in the South Atlantic area led with 64 percent, while the West showed only 29 percent. North Atlantic plants reported an increase from 14 to 43 percent.

Lard rendering also is on the increase, reported now by 26 percent of the plants and by over one-third of those in the South Central and the South Atlantic States.

To insure better products and make more efficient use of labor and byproducts, custom slaughtering by locker plants is increasing. Thirty-seven percent of the plants reporting provided slaughter at the plant, on the farm, or elsewhere. Twenty-two percent slaughtered at the plant, compared with 19 percent in 1943 and 5 percent in 1940.

Poultry dressing is on the increase. Of the plants reporting, 17 percent dressed poultry at the plant; 30 percent or more in the South Central and the South Atlantic and 8 percent in the Western States.

RATES OR CHARGES

Average rental rates and processing charges increased even during the war period. Though many older plants had rates frozen by OPA regulations, plants opened in new areas were able to set charges at substantially higher rates.

Rental rates averaged \$11.38 per locker on January 1, 1946, and \$10.13 for 1943; \$9.86 for 1942; and \$9.76 for 1941. They were lowest in the West (\$10.75 per locker) and highest in the South Atlantic States (\$13.53).

Processing rates also advanced. The average charge for chilling, cutting, wrapping, and freezing increased from \$1.65 per 100 pounds to \$2.01.

In plants where the processing charges included grinding, rates averaged \$2.37 per 100 pounds in 1946, compared with \$1.87 in 1943. Curing rates increased from \$3.15 per 100 pounds to \$3.41. Smoking rates averaged \$2.07 per 100 pounds, compared with \$1.68 in 1943, and ranged from \$1.00 in Maryland to \$5.00 in New Jersey.

Lard rendering cost, on the average, \$2.90 per 100 pounds, compared with \$2.40 in 1943; and ranged by areas from \$2.79 to \$4.32.

Charges for killing and processing poultry varied widely, and averaged 18.5 cents each for fryers. Charges for processing turkeys averaged 46 cents a bird. For wrapping and freezing only, rates averaged 7.9 cents a bird and 2.2 cents per pound (dressed weight) for fryers; and 22.3 cents a bird, or 2.2 cents a pound for turkeys.

Processing and freezing fruits and vegetables averaged 2.76 cents per pound. Rates for such service in most areas were lower than the cost of providing it. Many plants might find it desirable to raise the rates for such service and then to expand the operations to round out their services and get full use of the plants.

POUNDS OF PRODUCTS HANDLED

Products processed by the plants reporting as of January 1, 1946, averaged 353 pounds per locker, compared with 382 pounds for 1942. This volume consisted of: Beef, 163 pounds; pork, 135; lamb, 4; poultry, 15; game, 12; fruits, 13; and vegetables, 11. Pork cured averaged 65 pounds per locker, compared with 46 pounds for 1942. By weight, beef exceeded all other products; pork was second except in the South Atlantic States, where it ranked first. Commercially processed food sold by locker plants increased over 1942 except for packer beef and pork, which declined sharply. Locally processed vegetables and fruits sold by locker plants increased from 10 pounds per locker in 1942 to 26 in 1945.

NUMBER OF PLANTS

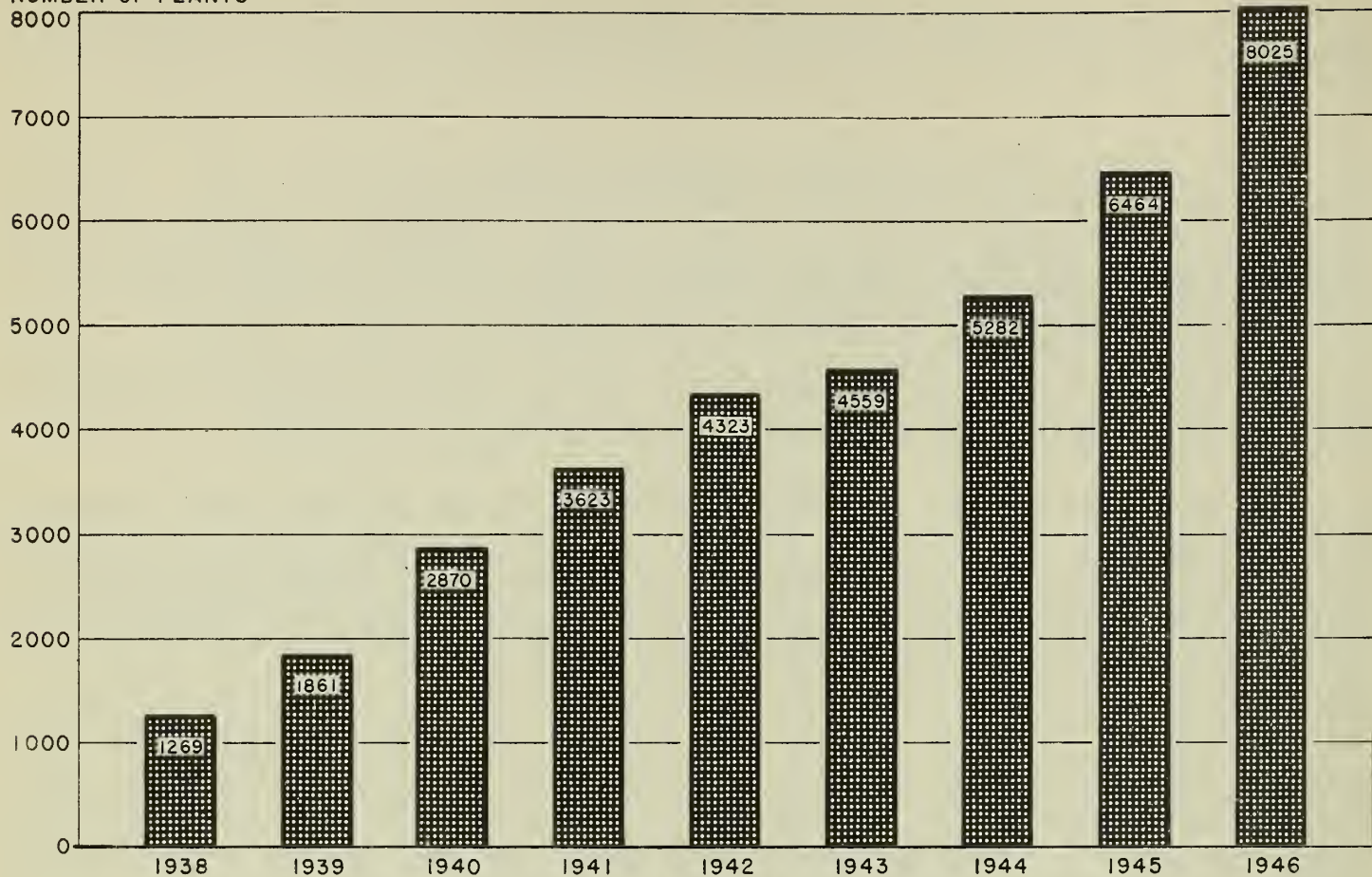


Figure 1. - Frozen-Food Locker Plants in the United States July 1, 1938 to July 1, 1946.

SOURCE: EXTENSION SERVICE.

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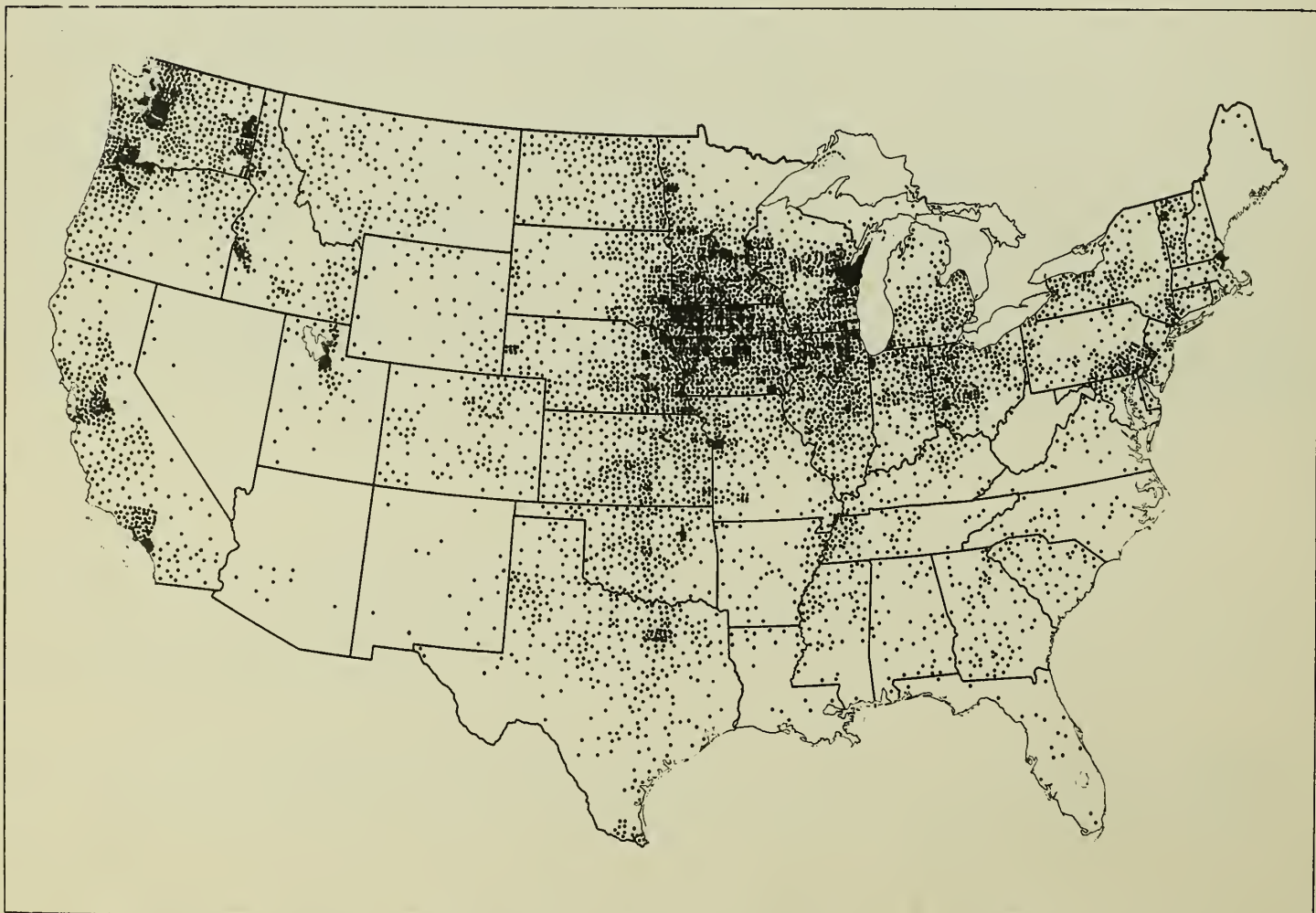


Figure 2. - Frozen-Food Locker Plants Operating January 1, 1946.

FROZEN-FOOD LOCKER PLANTS LOCATION, CAPACITY, RATES, AND USE JANUARY 1, 1946

By

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In recent years frozen-food locker plants have become an important factor in the field of food processing and preservation. Consisting of less than 1,300 plants in 1938, the industry has grown until in 1946 more than 8,000 plants were operating in the United States. (Figures 1 and 2.) An estimated 13 million people in the 48 States use these facilities as a means of preserving part of their food supply.

The statistical data on which this report is based were assembled from locker-plant operators early in 1946 by the Cooperative Research and Service Division, which has conducted six such surveys beginning with 1940.

This survey attempts to record information showing trends in the development of the industry that may have a bearing on the future of cooperative food processing and preservation.

The immediate objectives were to set forth statistically general facts regarding the development of the industry as of January 1, 1946, and to evaluate the statistical information in the light of previous surveys.

Of the 7,000 schedules mailed to plant operators more than 3,000 were returned. Forty-one percent (2,882) of the schedules provided enough information to be used in the analysis. Approximately 1,400,000 lockers were represented in the survey.

PLANTS REPORTING, LOCKER CAPACITY, AND USE OF PLANTS

Table 1 shows the number of plants reporting data on plant capacity and locker utilization; average locker capacity of plants, average number of lockers installed, and the locker rental situation by States and regions as of January 1, 1946. These data were derived from a sample of 2,861 plants from a total of approximately 7,000 plants surveyed.

LOCKER CAPACITY OF PLANTS

Average capacity of plants on January 1, 1946, was 500 lockers or a 15-percent increase over the 434-locker average reported in the July 1, 1944 survey. The phrase "locker capacity of plants" describes the size of plants in terms of the locker units, based on the total number of lockers that can be installed in existing low temperature rooms, whether or not the lockers are actually installed. The size of frozen-food locker plants has been steadily increasing since 1942. In surveys

NOTE: The authors wish to express their appreciation to Etta C. Emmons for her assistance in the preparation of this report.

Table 1. - Number of frozen-food locker plants reporting, average locker capacity of plants, lockers installed, lockers rented, and percentage of lockers rented of locker capacity and lockers installed, by State and region, January 1, 1946.

STATE AND REGION	PLANTS REPORTING	AVERAGE LOCKER CAPACITY OF PLANTS	AVERAGE LOCKERS INSTALLED	AVERAGE LOCKERS RENTED	PERCENTAGE LOCKERS RENTED OF LOCKER CAPACITY	PERCENTAGE LOCKERS RENTED OF LOCKERS INSTALLED
North Central States:						
Illinois.....	171	522	510	507	97	99
Indiana.....	89	636	617	611	96	99
Iowa.....	225	486	406	403	86	99
Kansas.....	144	492	454	447	91	98
Michigan.....	88	510	479	473	93	99
Minnesota.....	190	360	344	340	95	99
Missouri.....	85	525	505	494	94	98
Nebraska.....	150	383	370	364	95	99
North Dakota.....	75	334	312	307	92	99
Ohio.....	74	759	704	693	91	99
South Dakota.....	87	313	293	293	94	100
Wisconsin.....	227	369	354	351	95	99
Total or average.....	1,585	452	425	420	93	99
Western States:						
Arizona.....	5	669	666	664	99	100
California.....	152	734	668	642	87	96
Colorado.....	49	520	503	495	95	98
Idaho.....	55	501	482	475	95	99
Montana.....	55	384	339	337	93	99
Nevada.....	1	885	885	840	95	95
New Mexico.....	10	668	572	558	83	98
Oregon.....	90	557	534	523	94	98
Utah.....	31	860	828	810	94	98
Washington.....	178	521	504	498	96	99
Wyoming.....	21	498	451	438	88	97
Total or average.....	647	580	548	535	92	98
South Central States:						
Alabama.....	20	413	396	395	96	100
Arkansas.....	25	351	339	331	94	98
Kentucky.....	38	495	466	445	90	96
Louisiana.....	7	580	539	523	90	97
Mississippi.....	20	413	395	395	96	100
Oklahoma.....	62	471	450	448	95	100
Tennessee.....	24	409	383	382	93	100
Texas.....	129	502	481	473	94	98
Total or average.....	325	468	446	439	94	98
North Atlantic States:						
Connecticut.....	8	378	378	378	100	100
Maine.....	1	604	604	604	100	100
Massachusetts.....	11	596	561	561	94	100
New Hampshire.....	14	463	450	447	97	100
New Jersey.....	14	776	776	772	99	99
New York.....	59	630	606	602	96	99
Pennsylvania.....	74	793	706	697	88	99
Rhode Island.....	2	550	550	550	100	100
Vermont.....	17	378	367	360	95	98
Total or average.....	200	654	612	606	93	99
South Atlantic States:						
Florida.....	11	327	290	282	86	97
Georgia.....	32	481	393	390	81	99
Maryland.....	13	713	704	704	99	100
North Carolina.....	17	603	548	526	87	96
South Carolina.....	12	473	472	464	98	98
Virginia.....	18	585	559	554	95	99
West Virginia.....	1	850	850	850	100	100
Total or average.....	104	534	489	482	90	99
UNITED STATES.....	2,861	500	470	464	93	99

conducted by the Farm Credit Administration on January 1, 1940, 1941, and 1942, the average capacity ranged from 327 to 330 lockers per plant. In the survey of January 1, 1943, the average capacity increased to 348 lockers. On July 1, 1944, the capacity was 434 lockers and at the time of this survey, 500 lockers. (See figure 3.)

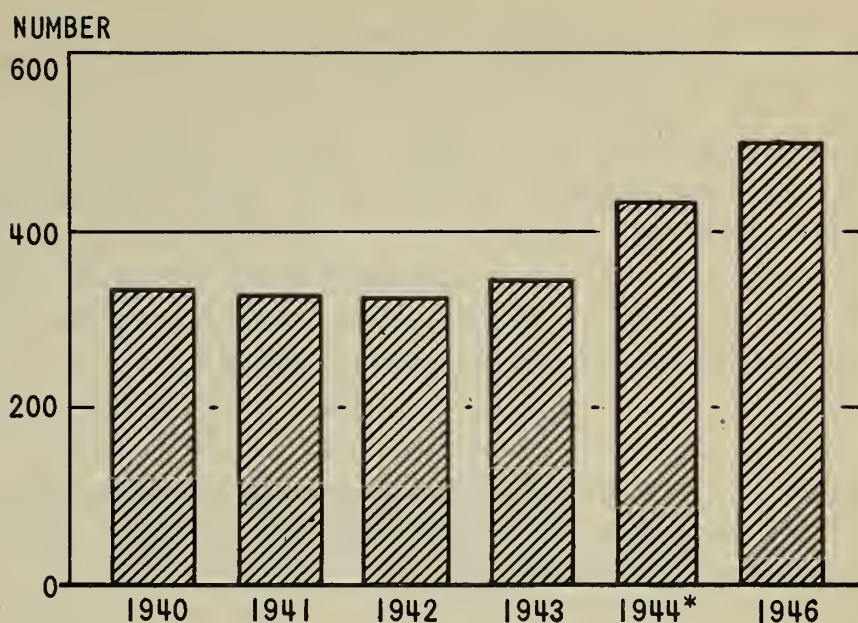


Figure 3. - Average locker capacity of frozen-food locker plants, January 1, 1940-46. (*Survey as of July 1, 1944.)

This steady growth may be attributed to several reasons. First, the increased popularity of locker storage service resulted in a larger number of potential patrons within a given trade area, thus encouraging the installation of larger locker plants or the expansion of existing facilities. Second, meat shortage and wartime rationing encouraged many people to demand locker storage service who previously had not used such services. Third, increased operating costs encouraged the construction of large and more efficient facilities where more labor-saving equipment could be used than in smaller plants. Fourth, increased confidence in the stability and economic worth of the locker industry and generally favorable returns on investments in recent years attracted additional capital into the industry.

From a historical point of view the larger locker plants have been located in the North Atlantic States. In this region a large portion of the plants are affiliated with ice and cold-storage concerns where considerable insulated and refrigerated space is available for ready expansion of locker facilities. The average plant capacity of all locker plants in this region was 654 lockers. Those plants affiliated with ice and cold-storage companies averaged space for 955 lockers.

In the Western States also the locker plants are larger than average. Plants from this region reported average capacity for 580 lockers; California, Nevada, and Utah reported over 700. Two conditions are believed responsible for the larger-than-average size: First, many plants are affiliated with ice and cold-storage companies and thus could expand rapidly to meet the increased demand for locker storage service; second, consumers in the western cities have been more inclined to use lockers than those living in other cities.

As previously indicated this discussion of locker-plant capacity assumes that locker capacity defines the size of the plant in terms of the number of lockers that can be installed in existing zero-temperature rooms. The size of most of the lockers is approximately 6 cubic feet.

In the Western States this, however, is not always the case. In the State of Oregon it was found that approximately 86 percent of the plants had other than 6-cubic-foot lockers (table 2). Average size locker for this State was 9.8 cubic feet. Thus, if we speak of the capacity of the Oregon plants in terms of space for accommodation of the standard 6-cubic-foot locker, the average size of the plants increases from 557 lockers to approximately 908 lockers. This situation is also true in the States of Washington, Idaho, Colorado, and California; and to a limited extent in some other States.

Table 2. - Frozen-food locker plants reporting, percentage of plants with 6-cubic-foot lockers, and percentage of plants having other than 6-cubic-foot lockers.

STATE	PLANTS REPORTING	PERCENTAGE OF PLANTS WITH 6 CU. FT. LOCKERS	PERCENTAGE OF PLANTS WITH OTHER THAN 6 CU. FT. LOCKERS ^a
Oregon.....	84	14.3	85.7
Washington.....	163	25.2	74.8
Idaho.....	52	40.4	59.6
Colorado.....	47	53.2	46.8
California.....	144	61.1	38.9
All other States.....	2,265	85.6	14.4
UNITED STATES.....	2,755	77.2	22.8

^aIncludes plants having 6-cubic-foot lockers together with odd-sized lockers. In many instances the 6-cubic-foot lockers outnumber the lockers of other sizes.

Smaller locker plants are found generally in the North Central States. Many small plants are installed in meat markets and grocery stores as supplements to the regular merchandising business. Also a high percentage of the plants were built earlier when frozen-food locker service was not generally known and its patrons not so numerous. As demand for lockers increased in this area, new locker plants and branch plants were built rather than existing plants expanded. States with plants averaging less than 400 lockers are Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin - States of early locker plant development.

LOCKERS INSTALLED

Lockers installed averaged 470 lockers per plant for the 2,861 plants analyzed in table 1. This is 30 lockers less than the average locker capacity of 500 lockers for the plants reporting. The space not occupied by these 30 lockers is generally the bulk zero-storage space provided by many plants for the overflow from the regular lockers and for the commercial storage of products for restaurants, hotels, and bakeries; as well as the storage of commercial frozen foods for sale through the locker plant. The demand for bulk storage space has increased during recent years and most new plants are now offering this service to their patrons.

It is estimated that the bulk zero-storage space available averages 420 cubic feet per plant; or space to store approximately 4 tons of meats, fruits, and vegetables if 75 percent can be considered effective piling space. The use of bulk storage space is quite flexible or elastic as compared with the use of lockers. When bulk storage is properly operated, the turn-over may be fast and the income substantial, while the income from lockers is fixed for the year.

It was found that those plants with large bulk storage space were generally affiliated with ice and cold-storage companies. In these plants the space available averaged 868 cubic feet or storage space for 8 tons of produce. In general the plants in the North and South Atlantic States reported more than average space devoted to bulk zero storage. Reports from 304 plants in the two regions indicated average bulk-storage space of 602 cubic feet. In the South Central States only 308 cubic feet were available and, in the North Central States, 364 cubic feet.

The situation just described presents a picture different from that of former years. Locker plants now devote 94 percent of the zero-storage area to lockers and only 6 percent to other uses. A survey of 1,655 plants in 1941 showed that only 77 percent of the zero space was devoted to lockers and 33 percent to other uses. These data apparently represent not a decline in the demand for bulk storage but rather an increase in the demand for locker storage. Much of the space not occupied by lockers in 1941 was probably unused because of a lack of demand for either lockers or bulk storage.

By 1943, the increasing popularity of locker storage service resulted in an increase to 89 percent of the space devoted to lockers with 11 percent left for other purposes.

LOCKERS RENTED

The rental of lockers and the use of locker facilities are now at an all-time high. Number of lockers rented averaged 464 per plant or 99 percent of all lockers installed at the time of this survey. In each plant the percentage of lockers rented is based on the actual number of lockers installed and available for rent.

Reports from 13 States indicated 100 percent rental of all lockers. Only one State reported rental as low as 95 percent. These data are better understood when compared with those of previous years. The survey of January 1, 1941, revealed that only 83 percent of the lockers installed were rented; the 1943 survey, 92 percent.

In the next section lockers rented are compared with total locker capacity of the plant, bringing under consideration the space devoted to, and the use made of, the remaining zero-temperature space normally termed "bulk storage."

PERCENTAGE OF CAPACITY RENTED

Column 5 of table 1 shows lockers rented as a percentage of total locker capacity of the plants. It should be kept in mind that the percentage of lockers rented is based on capacity of the plants rather than on number of lockers installed, as shown in column 6 of the table and as discussed in the preceding section. These data are of less value than in previous years. Formerly plants had space for considerably more lockers than were actually installed. The space not thus occupied could have been filled with lockers had there been sufficient demand, or it could have been used for bulk zero storage. In most plants, however, little or no use was made of this space. Thus, it was decided that to measure locker utilization, the total locker capacity of the plants should be used as the measure rather than the number of lockers installed.

When full utilization of locker facilities was realized, new measures needed to be found. It was believed that all zero-temperature space in locker plants was being used and that the space not occupied by lockers was providing income through bulk-storage fees. Thus, the basis for measuring locker utilization was changed from total locker capacity to the actual number of lockers installed, so as to show the almost complete use now being made of locker facilities.

The relevant facts are then: (1) 93 percent of all zero-temperature space in locker plants is occupied by rented lockers as compared with 64 percent in 1941, and 89 percent in 1943 (figure 4); (2) the increase in percentage rented shows the greater utilization of zero-temperature space for locker-storage service; and (3) there is a decline in space available for bulk-storage rental service.

SPECIFIED LOCKER CAPACITY OF PLANTS

Table 3 shows the number and percentage of locker plants by specified locker capacity of the plants. The survey indicated that 36 percent of all locker plants had space for from 200 to 400 lockers per plant, while only one-fourth of the plants had over 600 lockers. A significant number of plants, 16 percent, had less than 200 lockers. Of the plants reporting, however, only 3 percent had less than 100 lockers. These small plants are largely the branch locker rooms operated as adjuncts of a larger processing and locker plant.

One significant point is the difference in size of the most common plants in the various regions. In both the North Central States and the South Atlantic States about 40 percent of all plants fall in the 200-399 locker class. In the North Atlantic and South Atlantic States the greatest number of plants is in the 400-599 class. The western States have a fairly even distribution in all classes up to 600 lockers with a sizable portion of the plants in the 1,000 and over class.

The small plants of 200 lockers and less are chiefly in the North Central and Western States where branch-locker-room operation has developed and where many small plants operate in conjunction with meat markets and grocery stores.

In the North Atlantic and South Atlantic States 17 and 14 percent, respectively, of the plants have between 600 and 800 lockers. Here a high percentage of the locker plants are large ones, affiliated with ice and

cold-storage companies, and located in areas of heavily concentrated population. Also many plants were built during the time of recent trends toward increased size.

In the Western States 15 percent of the plants have capacity for 1,000 lockers and over. Many large plants here were built in metropolitan centers to serve city patrons.

The South Central States have few large locker plants. Rural development of the industry in that region results in medium-sized locker plants. Small plants are also relatively few, owing in part to the slow development of branch locker-room operation.

More detailed analysis of plant size showed that the most common-sized locker plant for each of the regions and for the United States was: North Central States, 300 lockers; Western States, 244 lockers; South Central States, 348 lockers; North Atlantic States, 437; South Atlantic States, 529 lockers; and the United States, 342 lockers.

AFFILIATION OF PLANTS

Many frozen-food locker plants are affiliated with other business enterprises. Many of the plants were installed because the parent enterprise could well fit the locker plant into the operation of the business. In other instances the locker plant was installed to attract additional business to the parent enterprise.

TYPES OF AFFILIATION

Table 4 shows the plants reporting, average locker capacity of plants, lockers installed, and the locker rental situation by affiliated enterprise on January 1, 1946. Approximately 35 percent of all plants were affiliated with meat markets and grocery stores, 16 percent with ice and cold-storage concerns, 10 percent with dairy plants, 10 percent with other enterprises, and 29 percent were not affiliated with any other

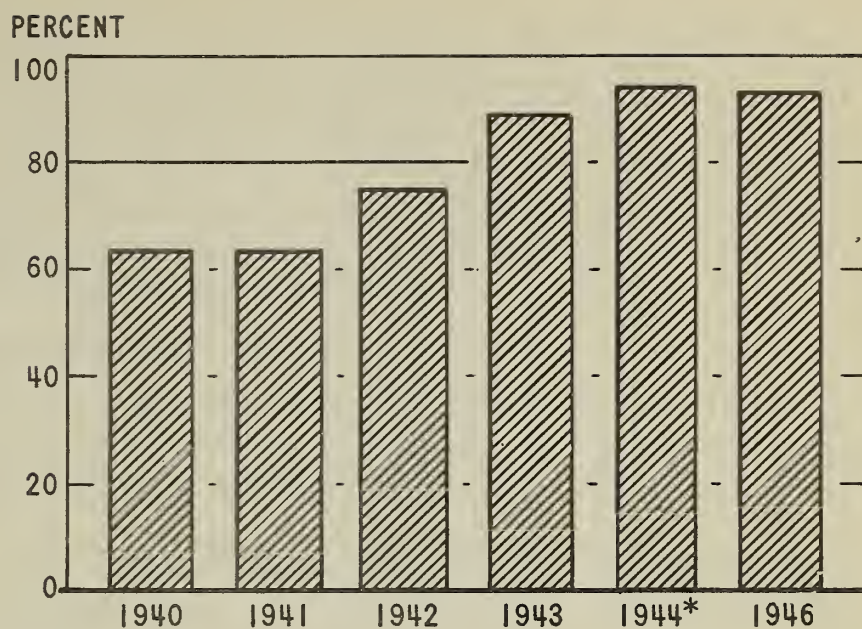


Figure 4. - Percentage of total locker capacity rented to locker patrons, January 1, 1940-46. (*Survey as of July 1, 1944.)

Table 3. - Number and percentage of frozen-food locker plants reporting by specified locker capacity of plants^a and region, January 1, 1946.

LOCKER CAPACITY	NORTH CENTRAL STATES		WESTERN STATES		SOUTH CENTRAL STATES		NORTH ATLANTIC STATES		SOUTH ATLANTIC STATES		UNITED STATES	
	PLANTS REPORTING	PERCENTAGE IN REGION	PLANTS REPORTING	PERCENTAGE IN REGION	PLANTS REPORTING	PERCENTAGE IN REGION	PLANTS REPORTING	PERCENTAGE IN REGION	PLANTS REPORTING	PERCENTAGE IN REGION	PLANTS REPORTING	PERCENTAGE IN REGION
0 - 199.....	273	17	132	20	27	9	17	8	7	7	456	16
200 - 399.....	646	40	173	27	134	41	45	22	25	24	1,023	36
400 - 599.....	345	22	128	20	98	30	56	28	46	44	673	23
600 - 799.....	162	10	65	10	32	10	33	17	15	14	307	11
800 - 999.....	73	5	51	8	11	3	18	9	5	5	158	5
1,000 and over....	97	6	100	15	24	7	31	16	6	6	258	9
Total.....	1,596	100	649	100	326	100	200	100	104	100	2,875	100

^aThe phrase "locker capacity of plants" describes the size of plants in terms of locker units based on the total number of lockers that can be installed in existing low-temperature rooms, whether or not the lockers are actually installed.

enterprise. The tendency during recent years has been toward non-affiliated locker plants, as indicated by a 60-percent increase in the proportion of nonaffiliated plants within the 3 years, 1943-46. This trend is partly explained by increased confidence in the stability of the industry and by the degree to which it is considered an individual industry, distinct from other types of business and requiring specialized skills and knowledge for successful operation.

AFFILIATION AND CAPACITY

Average capacity of locker plants varies with affiliation as shown by table 4 and figure 5. Those affiliated with ice and cold-storage concerns reported an average capacity of 742 lockers or over twice the

Table 4. - Number of frozen-food locker plants reporting, average locker capacity of plants, lockers installed, lockers rented, and percentage of lockers rented of locker capacity and lockers installed by affiliation, January 1, 1946.

TYPE OF AFFILIATION	PLANTS REPORTING	AVERAGE LOCKER CAPACITY OF PLANTS	AVERAGE LOCKERS INSTALLED	AVERAGE LOCKERS RENTED	PERCENTAGE LOCKERS RENTED OF LOCKER CAPACITY	PERCENTAGE LOCKERS RENTED OF LOCKERS INSTALLED
Meat market or grocery..	1,007	362	341	336	93	99
Ice or cold storage.....	455	742	682	676	91	99
Dairy plants.....	298	419	408	404	97	99
Other enterprise.....	279	537	504	495	92	98
Not affiliated.....	822	552	523	513	93	98
Total or average.....	2,861	500	470	464	93	99

362-locker average reported by plants affiliated with meat markets and grocery stores. Locker plants affiliated with dairies were also relatively small with an average of only 419 lockers. The nonaffiliated plants were among the largest with an average capacity of 552 lockers. Table 5 shows the growth of locker plants by affiliation as reported in the six surveys conducted by the Farm Credit Administration. All types of plants increased in capacity during the period surveyed. Those plants affiliated with ice and cold-storage concerns and with other enterprises had the greatest increase. Those affiliated with dairy plants showed the smallest increase. In general, however, substantial increases were made in all categories.

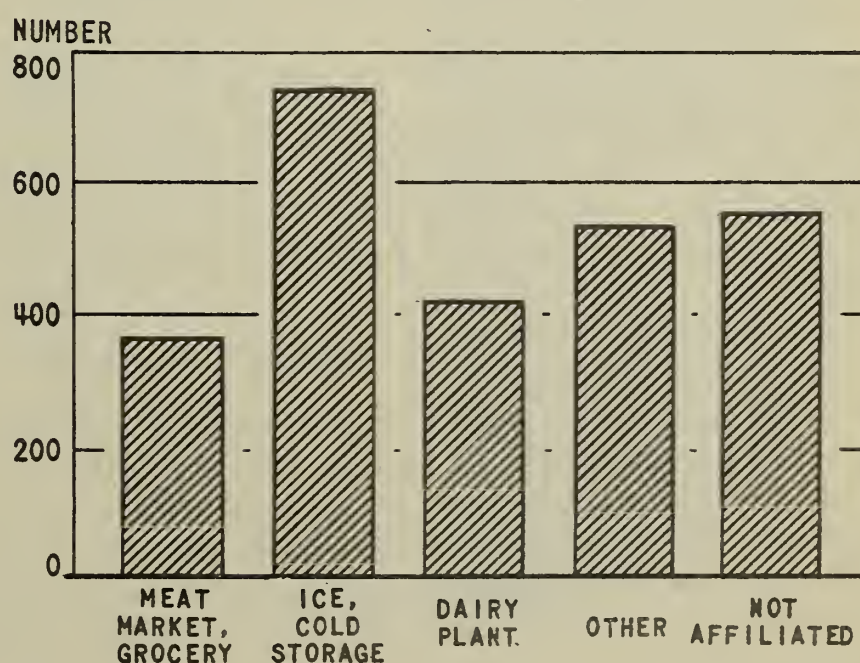


Figure 5. - Average locker capacity of frozen-food locker plants reporting January 1, 1946, by affiliation.

Table 5. - Average locker capacity of frozen-food locker plants, by affiliation, January 1, 1940-46.

YEAR ^a	LOCKER CAPACITY OF PLANTS					
	MEAT MARKET OR GROCERY	ICE OR COLD STORAGE	DAIRY PLANT	OTHER ENTERPRISE	NOT AFFILIATED	AVERAGE FOR ALL PLANTS
1940.....	231	406	325	264	431	330
1941.....	255	413	313	337	408	328
1942.....	240	447	327	327	415	327
1943.....	246	527	342	343	428	347
1944 ^b	283	680	395	434	482	434
1946.....	362	742	419	537	552	500

^aYear of survey.

^bSurvey July 1, 1944.

OWNERSHIP

Considerable change has occurred in ownership of frozen-food locker plants in recent years. Circumstances such as area of locker-plant development, capital requirements, profit possibilities, and other factors tend to encourage one group more than another and thus account for some of the changes that have taken place. It would be reasonable to expect that a sizable growth of the industry in the Western States would result in an increased percentage of plants owned by individuals and partnerships and a decline in the percentage of cooperatively owned plants if the past pattern of ownership is maintained and the demand for urban plants continues. On the other hand, an expansion in the South Atlantic or North Central States might be expected to increase the percentage of cooperatively owned plants because the current trend in these areas is toward much cooperative interest in locker-plant ownership. Part of the decline in individual ownership may be attributed to the increased cost of locker-plant construction, as well as to the increased size of new plants. Owners of other types are generally in position to accumulate more capital for construction purposes than are individuals.

Profit possibilities also might influence the type of ownership. In those areas where small returns on capital are anticipated, cooperative groups would normally be more inclined to enter the field than, for example, the corporate interests, as the cooperative would be concerned primarily with service to patrons and to a lesser extent with operating margins.

OWNERSHIP BY REGIONS

The data in table 6 show the types of ownership by regions. Plants owned by individuals accounted for 49 percent of all plants operating on January 1, 1946, (figure 6) and were of greatest importance in the North Central and Western States. It is significant that in the two areas 39 percent of the plants were affiliated with meat markets or grocery stores - usually individually owned businesses.

Cooperatively owned locker plants account for 13 percent of the total and were of major importance in the South Atlantic States with 22 percent

Table 6. - Ownership of 2,861 frozen-food locker plants reporting, by regions, January 1, 1946.

REGION	PLANTS OWNED BY								PLANTS REPORT- ING
	INDIVIDUALS		COOPERATIVES		PARTNERSHIPS		CORPORATIONS		
	PLANTS REPORT- ING	PERCENT- AGE OF TOTAL IN REGION	PLANTS REPORT- ING	PERCENT- AGE OF TOTAL IN REGION	PLANTS REPORT- ING	PERCENT- AGE OF TOTAL IN REGION	PLANTS REPORT- ING	PERCENT- AGE OF TOTAL IN REGION	
North Central.....	840	53	227	14	341	22	177	11	1,585
Western.....	328	51	52	8	158	24	109	17	647
South Central.....	130	40	39	12	93	29	63	19	325
North Atlantic.....	66	33	25	12	33	17	76	38	200
South Atlantic.....	26	25	23	22	15	14	40	39	104
UNITED STATES....	1,390	49	366	13	640	22	465	16	2,861

of the total for the region. Partnerships amounted to 22 percent of all plants reporting and were of major importance in the South Central and Western States. Plants owned by corporations accounted for the remaining 16 percent of the plants and were found to be most important in the North Atlantic and South Atlantic States.

The cooperative plants were found in greatest numbers in the North Central States with almost 60 percent of the reports from cooperatives coming from this region. As a percentage, however, they account for only 14 percent of the regional total. The corporate plants, as stated previously, were of greatest importance in the North Atlantic and South Atlantic States, where many of the plants are affiliated with ice and cold-storage corporations.

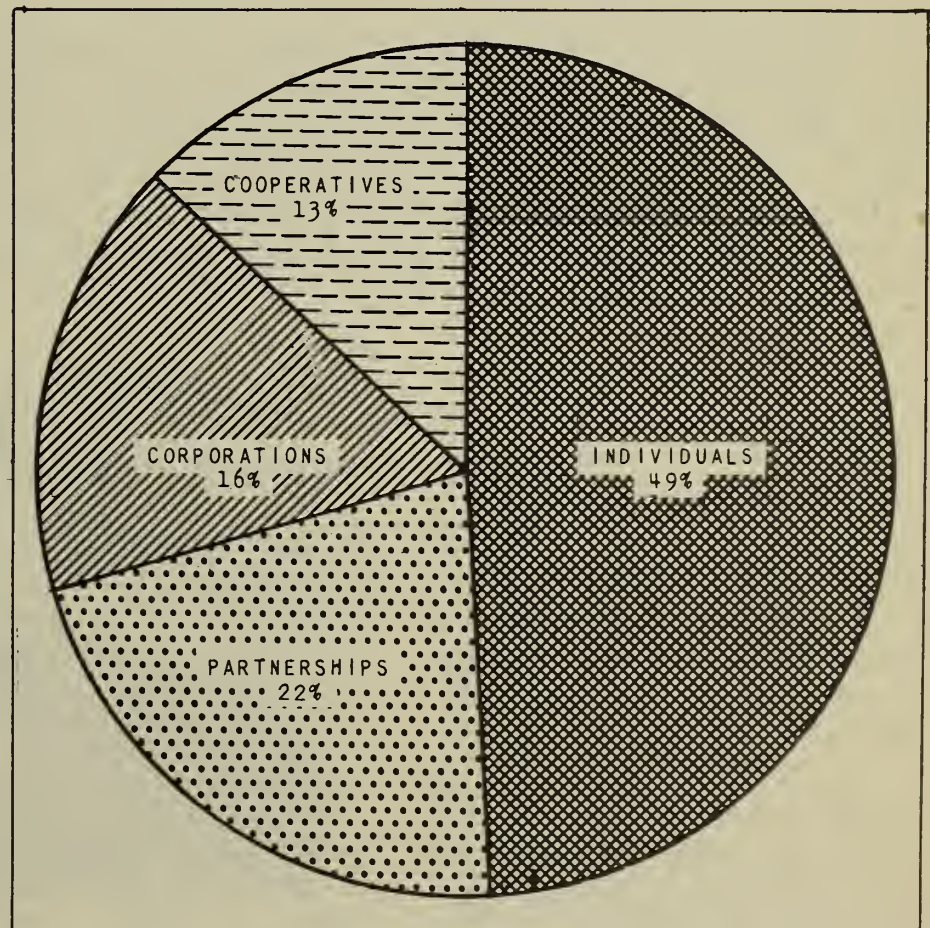


Figure 6. - Ownership of 2882 frozen-food locker plants reporting, January 1, 1946.

Table 7. - Ownership of 2,882 frozen-food locker plants reporting as of January 1, 1946, by year of opening.

YEAR OF OPENING	PLANTS OWNED BY								PLANTS REPORT- ING
	INDIVIDUALS		COOPERATIVES		PARTNERSHIPS		CORPORATIONS		
	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	
1935 and prior.....	43	28	14	9	20	13	75	50	152
1936.....	53	42	15	12	28	22	30	24	126
1937.....	70	43	34	21	28	17	30	19	162
1938.....	121	48	30	12	64	26	34	14	249
1939.....	168	56	32	11	55	19	43	14	298
1940.....	217	55	55	14	73	18	53	13	398
1941.....	166	54	26	9	76	25	37	12	305
1942.....	97	48	27	13	52	26	26	13	202
1943.....	65	48	19	14	28	20	25	18	137
1944.....	184	45	48	12	100	25	72	18	404
1945.....	219	49	66	15	119	26	45	10	449
UNITED STATES.....	1,403	49	366	13	643	22	470	16	2,882

YEAR OF PLANT OPENING

The analysis of ownership by year of opening is shown in table 7. These data are presented to show the years of greatest development for each type of ownership. It was found that individuals were opening the highest percentage of plants in 1939, 1940, and 1941. Cooperative plants had their greatest development from 1937 through 1940 and again in 1945. Partnership-opened plants have been fairly uniform as a percentage of all plants owned each year. Plants owned by this group averaged 22 percent of all plants opened, and ranged from 17 percent to 26 percent for the 10 years, since 1936. In the years prior to 1936, partnerships accounted for only 13 percent of total plants opened.

Locker plants opened by corporations were most important as a percentage of all plants opened in the period prior to 1936. Since that time corporate ownership has declined

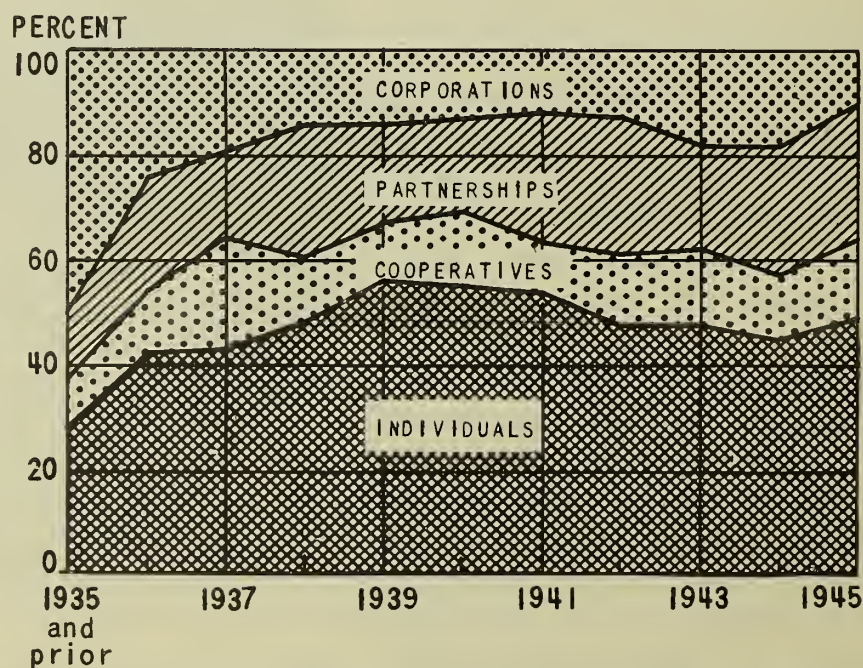


Figure 7. - Ownership of frozen-food locker plants reporting by year of opening.

Table 8. - Average locker capacity of frozen-food locker plants, by type of ownership, January 1940-46.

YEAR	LOCKER CAPACITY OF PLANTS OWNED BY				
	INDIVIDUALS	COOPERATIVES	PARTNERSHIPS	CORPORATIONS	AVERAGE
1940.....	266	359	328	450	330
1941.....	276	348	328	446	328
1942.....	273	339	318	484	327
1943.....	279	358	356	549	347
1944 ^a	373	413	397	641	434
1946.....	429	422	533	728	500

^aSurvey July 1, 1944.

in importance until in 1945 only 10 percent of all plants opened were thus owned (see also figure 7). However, it is reasonable to assume that this trend will be reversed and that corporate ownership will increase as the cost and size of locker plants increase. This form of organization lends itself to the handling of large amounts of capital necessary for present-day large-scale operations. Cooperatives also are likely to grow in relation to other groups as they too are so organized as to provide capital to meet increasing investment requirements.

OWNERSHIP AND CAPACITY

The data presented in tables 8 and 9 show the average capacity of plants operated by the various ownership groups as reported in the 6 surveys since 1940 and the average capacity for each type of ownership by regions on January 1, 1946. Corporate-owned plants average 728 lockers in the most recent survey and were the largest of the four ownership groups. An important reason for this is the high percentage of corporately owned ice and cold-storage concerns operating locker plants where considerable refrigerated space is available for large locker-plant operation.

Table 9. - Average locker capacity of plants for 2,861 frozen-food locker plants, by ownership and region, January 1, 1946.

REGION	PLANTS REPORT- ING	PLANTS OWNED BY				
		INDIVIDUALS	COOPERATIVES	PARTNERSHIPS	CORPORATIONS	ALL TYPES
North Central...	1,585	386	398	475	789	452
Western.....	647	483	463	651	826	580
South Central...	325	439	418	509	498	468
North Atlantic..	200	651	496	572	745	654
South Atlantic..	104	507	495	666	525	534
UNITED STATES.	2,861	429	422	533	728	500

Partnership-owned plants, averaging 533 lockers, are the second largest in locker capacity. As might be expected, this group is somewhat larger than the individually owned plants and smaller than the corporately owned. That is, more capital is likely to be available for plant construction than is normally available to individuals and less than that available to most corporations.

Individually owned plants, averaging 429 lockers, are the third largest in size. Small amounts of available capital, plus the practice of installing 100 to 200 lockers in individually owned meat markets and grocery stores, account for the low average of this group.

Cooperatively owned plants are the smallest of the four ownership groups, averaging only 422 lockers per plant. Several features in the cooperative locker-plant development account for this small size. First, many cooperative plants are affiliated with creameries and were installed to serve the limited number of creamery patrons. Second, a large percentage of the cooperative plants were built prior to 1941 when the average plant had less than 350 lockers. Third, cooperative locker plants are almost exclusively rural, where potential patronage in a given trade area is limited. Fourth, cooperative associations have been active in promoting small branch locker plants in trade areas too small to be served by a processing and locker plant. These branch plants are usually affiliated with an organization operating a central processing plant in a nearby town.

Table 10 shows ownership of plants by specified locker capacity. It is significant, that 22 percent of all plants owned by corporations have

Table 10. - Ownership of 2,875 frozen-food locker plants by specified locker capacity, January 1, 1946.

SPECIFIED LOCKER CAPACITY	PLANTS OWNED BY								ALL TYPES	
	INDIVIDUALS		COOPERATIVES		PARTNERSHIPS		CORPORATIONS			
	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL	PLANTS REPORT- ING	PER- CENT- AGE OF TOTAL
0 - 99.....	44	3	5	1	15	2	12	2	76	3
100 - 199.....	234	17	37	10	77	12	32	7	380	13
200 - 299.....	291	21	76	21	86	13	37	8	490	17
300 - 399.....	256	18	98	27	108	17	71	15	533	19
400 - 499.....	162	12	47	13	90	14	60	13	359	12
500 - 599.....	141	10	37	10	84	13	52	11	314	11
600 - 699.....	77	6	21	6	49	8	41	9	188	7
700 - 799.....	45	3	14	4	31	5	29	6	119	4
800 - 899.....	34	2	9	2	28	4	19	4	90	3
900 - 999.....	32	2	9	2	14	2	13	3	68	2
1,000 and over.....	81	6	13	4	61	10	103	22	258	9
Total.....	1,397	100	366	100	643	100	469	100	2,875	100

PERCENT

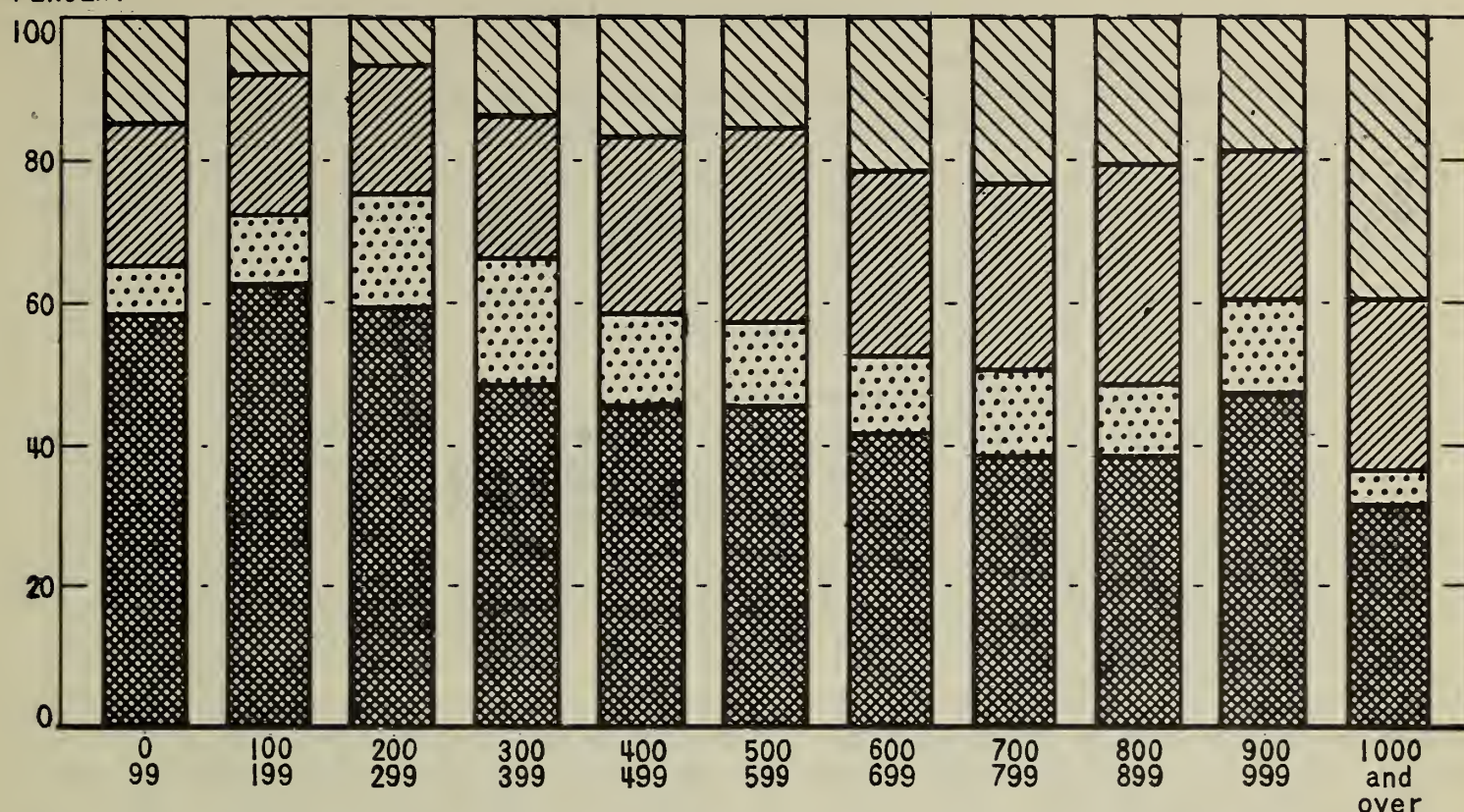


Figure 8. - Percentage of frozen-food locker plants of specified locker capacity by type of ownership, January 1, 1946.

1,000 or more lockers (figure 8), while the individually owned and the cooperatively owned plants have less than 400.

PATRONAGE

Seventy-three percent of all locker-plant patrons are farmers. Since the first locker-plant survey by the Farm Credit Administration in January 1940, less than 3 percent change has occurred in the relationship of farm and nonfarm patronage. (Figure 9.) The average number of patrons of locker plants on January 1, 1946, was 414 of which 301 were classed as farm patrons and 113 as city or town patrons. Figure 10 shows the increase in the number of farm and nonfarm patrons for 6 periods since January 1, 1940, and, as will be noted, little change occurred in the relationship of the two groups. Despite the increased number of city plants the locker industry is still primarily a rural industry, serving rural people.

PERCENT

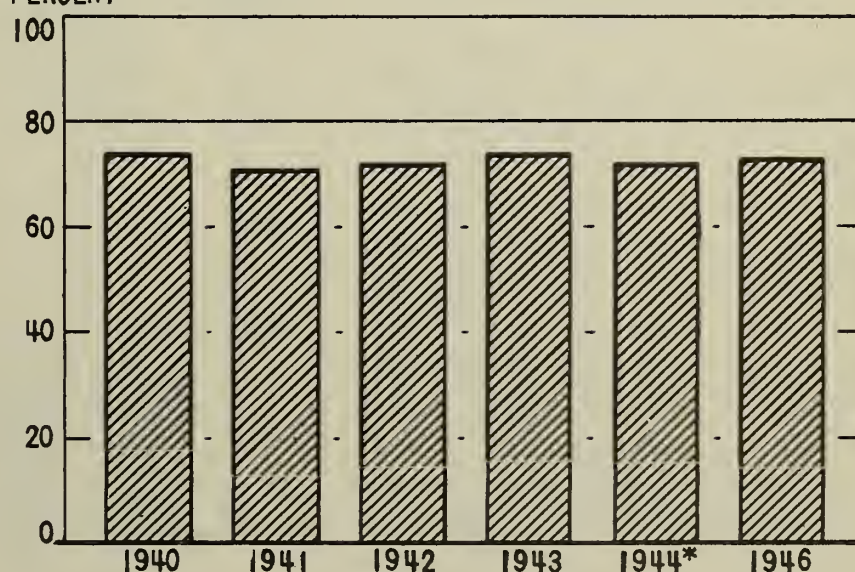


Figure 9. - Percentage farm patrons of all patrons in frozen-food locker plants, January 1, 1940-46. (*Survey as of July 1, 1944.)

PATRONAGE AND AFFILIATION

Table 11 shows the extent of farm and nonfarm patronage in locker plants by regions and affiliated enterprises. Plants affiliated with meat markets, grocery stores, and dairy plants reported 76 percent of all patrons living on farms. Nonaffiliated plants reported 75 percent farm patronage and other affiliated plants, 73 percent. The lowest percentage of farm patrons, 65 percent, was reported by those plants affiliated with ice and cold-storage concerns.

On a regional basis, farm patronage was reported at 78 percent in the North Central States and from 65 to 68 percent in the other four regions. The highest percentage of farm patrons in any group was for plants affiliated with meat markets and grocery stores in the North Central States, where 83 percent of all patrons live on farms. The lowest percentage of farm patrons was for plants affiliated with dairy plants in the North Atlantic States and for ice and cold-storage plants in the South Atlantic States.

The extent of farm patronage in a locker plant is influenced in part by the type of business with which it is affiliated. However, the size of town in which the plant is located and the demand for locker service by city patrons largely determine the degree of farm and nonfarm patronage. This shows up rather clearly in the variations in farm patronage among the regions for the locker plants affiliated with dairies. In the four regions, exclusive of the North Atlantic States, locker plants affiliated with dairies average from 68 to 79 percent farm patronage. In these regions the dairy plants are generally located in small towns or rural areas. Dairy plants in the North Atlantic States, however, are to a much greater extent located in larger towns and cities. As indicated by the table, farm patronage in this region averages only 53 percent of total patronage.

PATRONAGE AND POPULATION
OF TOWN

Table 12 shows the extent of city or nonfarm patronage in locker plants located in various sized towns and cities (see also figure 11). As indicated in the table, nonfarm patrons average 27 percent of all patrons and vary from 18 percent in towns of under 1,000 population to 51 percent in towns of 25,000 and over population. When analyzed on a regional basis, it was found that nonfarm patrons

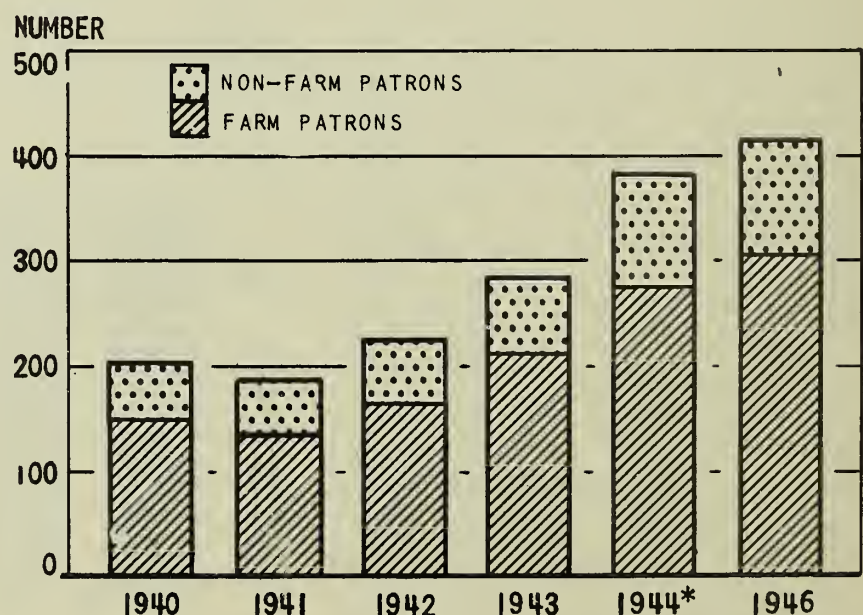


Figure 10. - Average number of farm and nonfarm patrons of frozen-food locker plants, January 1, 1940-46. (*Survey as of July 1, 1944.)

Table 11. - Average number of patrons per locker plant and percentage of patrons living on farms by affiliation and region, January 1, 1946.

AFFILIATED ENTERPRISE	NORTH CENTRAL STATES		WESTERN STATES		SOUTH CENTRAL STATES		NORTH ATLANTIC STATES		SOUTH ATLANTIC STATES		UNITED STATES	
	AVERAGE NUMBER OF PATRONS	PERCENT-AGE OF PATRONS LIVING ON FARMS	AVERAGE NUMBER OF PATRONS	PERCENT-AGE OF PATRONS LIVING ON FARMS	AVERAGE NUMBER OF PATRONS	PERCENT-AGE OF PATRONS LIVING ON FARMS	AVERAGE NUMBER OF PATRONS	PERCENT-AGE OF PATRONS LIVING ON FARMS	AVERAGE NUMBER OF PATRONS	PERCENT-AGE OF PATRONS LIVING ON FARMS	AVERAGE NUMBER OF PATRONS	PERCENT-AGE OF PATRONS LIVING ON FARMS
Meat market												
grocery.....	286	83	327	64	330	69	429	68	344	69	306	76
Ice, cold												
storage.....	617	68	691	64	423	68	763	61	495	56	611	65
Dairy plants..	337	79	419	70	299	68	333	53	401	71	355	76
Other												
enterprise..	391	81	519	65	463	64	414	67	346	70	432	73
Not affiliated	437	79	571	67	436	70	391	70	443	74	452	75
Average.....	384	78	480	65	398	68	483	65	425	68	414	73

Table 12. - Average number of nonfarm patrons per locker plant by region and size of town, January 1, 1946.

POPULATION OF TOWN	NORTH CENTRAL STATES		WESTERN STATES		SOUTH CENTRAL STATES		NORTH ATLANTIC STATES		SOUTH ATLANTIC STATES		UNITED STATES	
	AVERAGE NONFARM PATRONS	PERCENT-AGE OF ALL PATRONS	AVERAGE NONFARM PATRONS	PERCENT-AGE OF ALL PATRONS	AVERAGE NONFARM PATRONS	PERCENT-AGE OF ALL PATRONS	AVERAGE NONFARM PATRONS	PERCENT-AGE OF ALL PATRONS	AVERAGE NONFARM PATRONS	PERCENT-AGE OF ALL PATRONS	AVERAGE NONFARM PATRONS	PERCENT-AGE OF ALL PATRONS
1 -	499	33	54	22	40	18	124	32	73	22	43	18
500 -	999	42	93	29	51	19	112	26	32	11	53	18
1,000 -	1,999	55	95	24	66	21	99	29	89	28	67	19
2,000 -	4,999	84	170	31	99	26	165	32	112	31	112	25
5,000 -	9,999	114	191	29	148	32	171	33	143	32	143	26
10,000 -	24,999	198	342	40	242	40	147	32	136	30	233	35
25,000 and over	443	46	450	56	414	57	397	47	525	51	440	51
Average.....	83	22	166	35	126	32	168	35	137	32	113	27

were most important in the North Atlantic and South Atlantic States. In both regions over 25 percent of the plants were located in towns of 10,000 population and over. The Western States reported 22 percent of the plants in the larger towns, while the North Central and South Central States reported 11 percent and 17 percent, respectively.

POPULATION OF TOWN

The population of towns in which locker plants are located also has considerable influence on plant size and services. Locker plant size is usually related to population of town and size of its trading area. Locker plant services, both number and type, are often determined by the services already available in the community. Smaller towns usually have less adequate and less satisfactory sources of commercial food supply and fewer local processing services than the larger towns. Thus they afford the plant operator a better opportunity to offer a variety of services.

POPULATION AND YEAR OF OPENING

Table 13 and figure 12 show the percentage of plants opened in towns of specified populations by year in which the plant opened. The most important change that has taken place in the last several years is the shift in new plant construction from the large towns and cities to the towns of less than 5,000 population. This is contrary to the belief of many observers who report that the present trend is toward urban centers. It is true that many plants are now being built in the larger cities and towns but the results of this survey indicate that their number is still relatively small when compared with the number of plants being built in the rural towns. The survey shows that 83 percent of all plants opened in 1945 were in towns of under 5,000 population, while in 1943 only 62 percent were opened in towns of such size.

With the exception of one year since 1935 the great majority of the plants have been built in rural towns of less than 5,000. Prior to that date half of the plants were in towns of over 5,000; then the trend quickly turned to rural areas except in 1943 when 38 percent of the plants were constructed in towns of over 5,000 population. Since that year the trend is again toward the smaller towns.

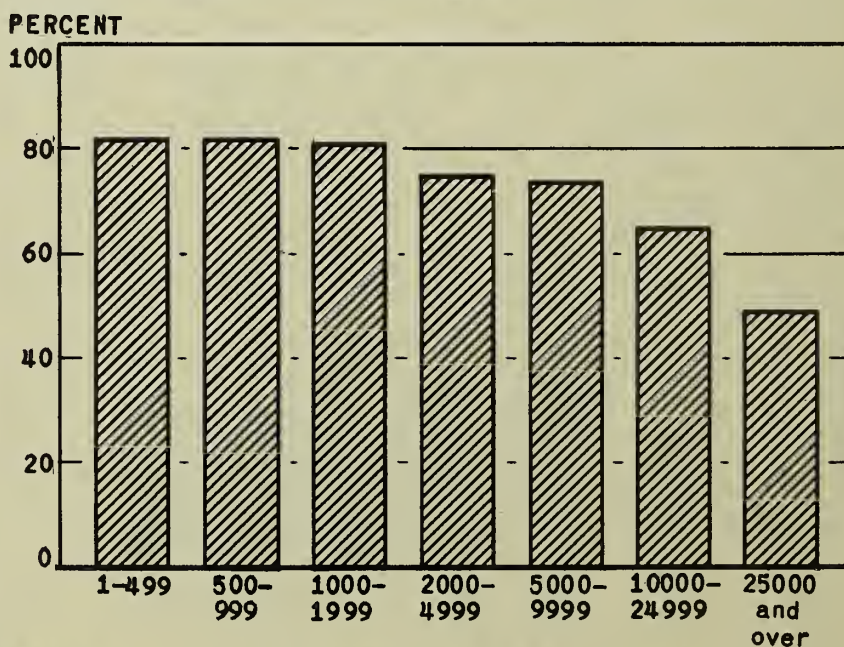


Figure 11. - Percentage of farm and nonfarm patrons of frozen-food locker plants, by size of town, January 1, 1946.

Table 13. - Percentage of 2,882 frozen-food locker plants opened since 1935 and earlier, in towns of specified population.

POPULATION OF TOWN	OPENED IN 1935 AND EARLIER	PERCENTAGE OF PLANTS IN TOWNS OF INDICATED SIZES											AVERAGE PERCENTAGE FOR ALL YEARS
		OPENED 1936	OPENED 1937	OPENED 1938	OPENED 1939	OPENED 1940	OPENED 1941	OPENED 1942	OPENED 1943	OPENED 1944	OPENED 1945		
1 - 499...	11	21	15	18	25	27	23	22	21	23	32	23	
500 - 999...	7	13	14	23	18	16	17	17	9	16	15	16	
1,000 - 1,999...	18	17	18	20	20	15	19	17	19	17	16	17	
2,000 - 4,999...	16	20	21	19	14	20	15	15	13	18	20	18	
5,000 - 9,999...	14	10	16	8	9	9	7	9	14	11	8	10	
10,000 - 24,999...	20	13	10	6	9	7	8	9	16	8	5	9	
25,000 and over...	16	6	6	6	5	6	11	11	8	7	4	7	
Total.....	100	100	100	100	100	100	100	100	100	100	100	100	

Table 14. - Percentage of 2,882 frozen-food locker plants operating in towns of specified population, by regions, January 1, 1946.

POPULATION OF TOWN	PERCENTAGE OF PLANTS IN TOWNS OF INDICATED SIZES						UNITED STATES
	NORTH CENTRAL STATES	WESTERN STATES	SOUTH CENTRAL STATES	NORTH ATLANTIC STATES	SOUTH ATLANTIC STATES		
1 - 499.....	27	25	12	14	10	23	
500 - 999.....	21	14	6	5	7	16	
1,000 - 1,999.....	19	14	18	18	15	17	
2,000 - 4,999.....	14	17	30	19	28	18	
5,000 - 9,999.....	8	8	17	16	14	10	
10,000 - 24,999.....	6	11	9	16	19	9	
25,000 and over.....	5	11	8	12	7	7	
Total.....	100	100	100	100	100	100	

During the war years the construction of locker plants in urban areas was held back by the War Production Board. The large number opened in 1943 were probably started in 1942 before War Production Board regulations governing the construction of locker plants came into effect.

PLANT LOCATION AND SIZE OF TOWN

Table 14 shows by regions the percentage of locker plants operating in towns of specified population. Seventy-four percent of all plants were operating in towns of less than 5,000 population with almost 40 percent of the total plants in towns of less than 1,000 population. Sixteen percent of the plants were in towns of 10,000 and over.

The North Central States reported 89 percent of the plants in towns of less than 10,000 with 81 percent in towns of less than 5,000. The Western States reported 70 percent of all plants in towns of less than 5,000 and 25 percent in towns of less than 500. Locker plants in other regions were likewise found chiefly in the small rural towns. In the South Central States 66 percent of the plants were in towns of less than 5,000 and in the South Atlantic States, 60 percent.

LOCKER CAPACITY AND SIZE OF TOWN

In planning new locker plants the question of plant size is usually the most difficult to answer. No formula has yet been devised to measure accurately the locker plant needs of a community and its trading area. Two important factors, however, are the population of the community and the number of farm people that use the community as a trading center. Table 15 was designed to show the relationship between plant size and population of the community. No attempt was made to measure the influence of the trading area on plant size, but this is felt to be even more important than size of town. The large percentage of farm patrons using locker plants tends to prove this.

The data shown in the table indicate a general correlation between size of town and size of locker plant. Sixty-eight percent of the plants with less than 200 lockers were in towns of less than 1,000 population. Fifty-five percent of the plants between 200 and 399 lockers were in these towns, while 6 percent of the 1,000-or-more-locker plants were thus located. The larger towns with populations of 10,000 or more had only 5 percent of the plants with

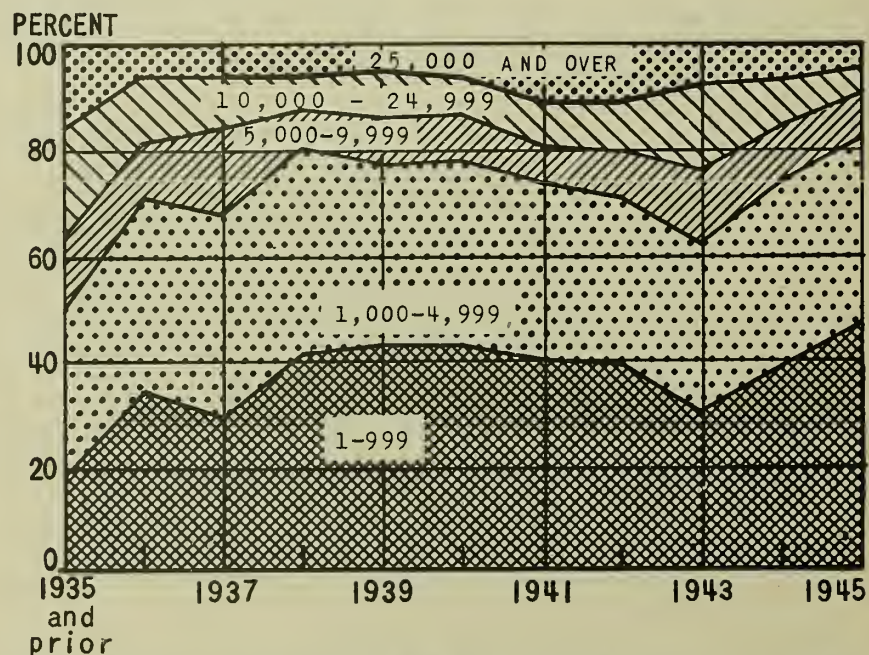


Figure 12. - Percentage of frozen-food locker plants opened during the past 10 years and all prior years in towns of specified population.

Table 15. - Percentage of frozen-food locker plants as specified locker capacity operating in towns of indicated population, January 1, 1946.

POPULATION OF TOWN	PERCENTAGE OF PLANTS WITH SPECIFIED LOCKER CAPACITY						ALL PLANTS
	0-199 LOCKERS	200-399 LOCKERS	400-599 LOCKERS	600-799 LOCKERS	800-999 LOCKERS	1,000 LOCKERS AND OVER	
0 - 499.....	49	31	13	6	5	4	23
500 - 999.....	19	24	13	7	3	2	16
1,000 - 1,999.....	12	22	24	14	11	3	17
2,000 - 4,999.....	11	13	25	28	25	14	18
5,000 - 9,999.....	4	5	11	21	14	20	10
10,000 - 24,999.....	2	3	10	15	21	24	9
25,000 and over.....	3	2	4	9	21	33	7
Total.....	100	100	100	100	100	100	100

less than 200 lockers but accounted for 57 percent of the 1,000-and-over plants. Since in general, the size of plant has a very close relationship with the population of the town in which it is located the size of town is an important consideration when determining the size of a new plant for a community.

PROCESSING AND SLAUGHTERING SERVICES

Prior to 1935 the rental of storage lockers was the principal service rendered by most locker plants. Plants opened since 1935 have usually included facilities for related processing services. Many of the older plants have also added new services. Most plants at the present time offer chilling, aging, cutting, grinding, wrapping, and sharp freezing services. The more modern plants, particularly in rural areas, also offer one or more supplementary services such as pork curing and smoking, lard rendering, slaughtering, poultry picking and dressing, vegetable blanching, packaging and freezing of fruits and vegetables.

MEAT CHILLING, CUTTING, WRAPPING, FREEZING, AND GRINDING

Eighty-seven percent of the 2,882 plants reporting offered chilling, cutting, wrapping, freezing, and grinding services as compared with 80 percent in 1943, and 74 percent in 1941 (table 16). From 90 to 95 percent of all plants in the North Central, South Central, and South Atlantic regions rendered these services (table 17). In the Western States only 76 percent of the plants provided these services, and 81 percent in the North Atlantic States. The lower percentage offering these services in the Pacific Northwest and the North Atlantic States is probably due to three factors. First, the high proportion of locker plants operated in connection with commercial cold-storage and ice plants, creameries, and fruit-storage establishments which offer little or no processing service. Second, in the Western States, numbers of older plants do no processing. Third, but less important, is that in

Table 16. - Percentage of frozen-food locker plants providing major processing services, January 1, 1941-46.

YEAR	PERCENTAGE OF PLANTS PROVIDING INDICATED PROCESSING SERVICE			
	CUT, WRAP, GRIND, AND FREEZE	CURE	SMOKE	RENDER LARD
1941.....	74	40	37	29
1942.....	74	41	37	28
1943.....	80	39	34	27
1944 ^a	79	35	32	22
1946.....	87	42	37	26

^aSurvey July 1, 1946.

the Western States, where fruits and vegetables are stored extensively, there is less incentive to provide meat-processing facilities and services at the locker plant.

CURING

The proportion of locker plants which provide pork-curing service increased from 39 percent on January 1, 1943, to 42 percent January 1, 1946 (table 16). The highest percentages, 57 and 64 percent, were reported in the South Central and South Atlantic areas, where high temperatures make farm curing hazardous throughout the greater portion of the year. The lowest percentage, only 29, reported in the Western States, is in line with the limited hog production in this region. The relatively low percentage of plants providing curing service in the North Central region may be due to several factors: longer cold period, large number of plants operated by meat markets, and sizable number of old plants operated by creameries, cheese factories, and ice and cold-storage companies.

SMOKING

Plants that provide smoking service averaged 37 percent on January 1, 1946, as compared with 34 percent on January 1, 1943. The South Central States reported the highest percentage, 45, and the West the lowest, 24. Other areas were about the same at 39 and 40 percent. The South Atlantic area reported that 64 percent of the plants cured pork and that only 39 percent smoked meats. This seems to indicate that many patrons in the South still prefer cured pork rather than smoked and cured pork as is the rule in the North. Smoking is increasing in the South, however, and indications point to increased demand for smoking in all areas.

Table 17. - Number and percentage of frozen-food locker plants reporting that provide major processing services, by regions, January 1, 1946.

REGION	TOTAL PLANTS REPORTING	MAJOR PROCESSING SERVICES							
		CHILL, CUT, WRAP, GRIND, AND FREEZE		CURE		SMOKE		RENDER LARD	
		PLANTS REPORTING SERVICE	PERCENTAGE OF PLANTS IN AREA	PLANTS REPORTING SERVICE	PERCENTAGE OF PLANTS IN AREA	PLANTS REPORTING SERVICE	PERCENTAGE OF PLANTS IN AREA	PLANTS REPORTING SERVICE	PERCENTAGE OF PLANTS IN AREA
North Central.....	1,600	1,446	90	680	42	628	39	484	30
Western.....	650	497	76	186	29	156	24	84	13
South Central.....	327	309	94	187	57	148	45	108	33
North Atlantic.....	200	162	81	86	43	80	40	34	17
South Atlantic.....	105	100	95	67	64	41	39	40	38
UNITED STATES.....	2,882	2,514	87	1,206	42	1,053	37	750	26

Table 18. - Number and percentage of frozen-food locker plants that provide slaughtering and poultry dressing services, by regions, January 1, 1946.

REGION	PLANTS REPORTING	SLAUGHTER ON FARM ^a		SLAUGHTER AT PLANT		SLAUGHTER ELSEWHERE		DRESS POULTRY	
		PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE	PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE	PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE	PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE
		PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE	PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE	PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE	PLANTS PROVIDING SERVICE	PERCENTAGE OF PLANTS IN AREA PROVIDING SERVICE
North Central.....	1,600	193	12	475	30	83	5	270	17
Western.....	650	30	5	40	6	27	4	52	8
South Central.....	327	17	5	96	29	26	8	99	30
North Atlantic.....	200	4	2	12	6	10	5	28	14
South Atlantic.....	105	6	6	15	14	13	12	35	33
UNITED STATES.....	2,882	250	9	638	22	159	6	484	17

^aLocker plant provides personnel for slaughtering at the farm.

LARD RENDERING

The proportion of all plants reporting which render lard shows a slight decline from 27 percent in 1943 to 26 percent in 1946. Shortage of equipment and labor may have been one reason for the lack of greater expansion in this service. While proportionately this service shows a decline, the actual number of plants doing lard rendering increased. The South Atlantic and South Central regions led with 38 and 33 percent, while the Western States and the North Atlantic were lowest with only 13 and 17 percent. The rendering of lard is one of the most satisfactory services offered by locker plants from both the patron's and the plant's standpoints. Not only does it relieve the housewife of a disagreeable task at home, but it tends to utilize surplus fat most effectively and to increase the locker plant's revenue. In contrast with the retailer who sells all the surplus fat he can on meat cuts, the locker-plant operator should be interested in trimming surplus fat and thus freeing additional storage space in the locker.

SLAUGHTERING

Table 18 shows the number and percentage of frozen-food locker plants that provided slaughtering and poultry dressing service, by regions, on January 1, 1946. The survey indicates that custom slaughtering at locker plants is increasing in popularity. Twenty-two percent of the plants provided slaughtering at the plant, as compared with 19 percent in 1943 and only 5 percent in 1940. The proportion of plants that offered butchering on the farm dropped from 20 percent in 1943 to 9 percent in 1946. Likewise the percentage of plants that provided slaughtering elsewhere declined from 17 percent in 1943 to 6 percent in 1946.

No doubt, shortage of help was a principal reason for the sharp reduction in this type of service. Increased farm slaughter by farmers themselves, as well as by an increased number of small private killing plants, also took place during this period. Indications point to a substantial expansion of slaughtering at locker plants in the future and this will tend to insure higher-quality products as well as better utilization of labor and of byproducts.

In several States locker plants in a county or area are constructing centralized slaughtering and processing plants to service the group of plants. This development appears to be sound.

Size of plant naturally has an effect upon the extent and variety of services rendered (see table 19). Those plants rendering the fewest services were the small plants of 200 lockers or less, while those rendering the most complete services were plants with capacity of 400 to 900 lockers. Plants of 1,000 or more lockers, located mostly in larger towns and cities, were next to the small plants in limitation of services rendered.

Table 19. - Number and percentage of plants of specified capacity in lockers that provide major processing services, January 1, 1946.

PLANT CAPACITY IN LOCKERS	PLANTS REPORT- ING	MAJOR PROCESSING SERVICES							
		CHILL, CUT, WRAP, FREEZE, AND GRIND		CURE		SMOKE		RENDER LARD	
		NUMBER OF PLANTS	PERCENT- AGE OF PLANTS IN GROUP	NUMBER OF PLANTS	PERCENT- AGE OF PLANTS IN GROUP	NUMBER OF PLANTS	PERCENT- AGE OF PLANTS IN GROUP	NUMBER OF PLANTS	PERCENT- AGE OF PLANTS IN GROUP
0 - 99.....	76	40	53	5	7	5	7	3	4
100 - 199.....	380	285	75	88	23	82	22	46	12
200 - 299.....	490	433	88	164	33	142	29	88	18
300 - 399.....	533	491	92	217	41	176	33	132	25
400 - 499.....	359	325	91	173	48	145	40	112	31
500 - 599.....	314	290	92	190	61	167	53	128	40
600 - 699.....	188	173	92	94	50	83	44	70	37
700 - 799.....	119	105	88	62	52	55	46	46	39
800 - 899.....	90	83	92	49	54	47	52	35	39
900 - 999.....	68	62	91	36	53	31	46	17	25
1,000 and over.....	258	221	86	124	48	118	46	73	28
Total.....	2,875	2,508	87	1,202	42	1,051	37	748	26

POULTRY SLAUGHTERING AND DRESSING

The proportion of locker plants doing poultry dressing and slaughtering averaged 17 percent on January 1, 1946, as compared with 23 percent in 1943. While the tendency on the part of many established plants has been to add this service, the large number of new plants built, of which many were unable to purchase equipment, may be one cause for this drop in percentage. Likewise the shortage of help in many plants has hindered them from taking on this additional service. Keen demand coupled with high prices by city consumers for live poultry during this period may be another reason for reduction in locker-plant poultry operations. As supplies of poultry become more ample and equipment and help become available, indications point to increased poultry dressing and freezing by locker plants.

The leading States providing poultry-dressing service were in the South Atlantic and South Central regions. Here over 30 percent of the plants had such service, in contrast with only 8 percent in the Western States (table 18). The largest increase in this service occurred in the South Atlantic States and the sharpest decrease in the South Central.

LOCKER RENTAL AND PROCESSING RATES

Locker rental and processing rates have steadily increased since the first survey of locker-plant charges on January 1, 1941. Table 20 shows the average annual locker-rental rate and the processing charges for major services, by regions, as reported in the last five surveys.

In the period covered, locker rental rates increased 17 percent or from \$9.76 to \$11.38; 56 percent of the increase occurred in the 18 months preceding January 1, 1946. The largest increase took place in the North Atlantic States where rates rose from \$8.61 on January 1, 1941, to \$12.84 on January 1, 1946, or an increase of 49 percent. The North Central States reported only an 8 percent increase in the same period or from \$10.18 to \$11.04 per year.

Average cut, wrap, and freeze rates rose 55 percent from \$1.30 to \$2.01 per 100 pounds during the period from January 1, 1941, to January 1, 1946. The North Atlantic States registered the greatest percentage increase, with rates increasing from \$1.42 in January 1, 1941, to \$2.71 on January 1, 1946. This represents a 91-percent increase for the region. The South Atlantic States also had a large increase. Average cut, wrap, and freeze rates in that region increased 80 percent or from \$1.64 per 100 pounds to \$2.96. The North Central States reported only a 40-percent increase for the 5 years and averages considerably below the other regions.

Rates for cutting, wrapping, freezing, and grinding were secured in the last four surveys only. These rates increased 39 percent from January 1, 1942, to January 1, 1946, and were highest again in the North and South Atlantic States and lowest in the North Central States.

Table 20. - Comparative analysis of average locker rental and processing rates, by regions, January 1, 1941, 1942, 1943, 1944,^a and 1946.

REGION AND YEAR	AVERAGE ANNUAL LOCKER RENTAL RATE	PROCESSING RATE PER HUNDRED POUNDS FOR					
		CUT, WRAP, AND FREEZE	CUT, WRAP, FREEZE, AND GRIND	GRIND	CURE	SMOKE	RENDER LARD
North Central:							
1941.....	\$10.18	\$1.24	-	\$1.08	\$2.60	\$1.37	\$2.12
1942.....	10.23	1.42	\$1.63	1.10	2.82	1.41	2.19
1943.....	10.41	1.53	1.75	1.15	3.12	1.64	2.39
1944.....	10.43	1.60	1.87	1.14	3.17	1.74	2.54
1946.....	11.04	1.74	2.06	1.28	3.35	1.93	2.79
Western:							
1941.....	8.44	1.33	-	1.22	2.70	1.57	1.94
1942.....	8.68	1.55	1.90	1.38	2.97	1.55	2.25
1943.....	9.17	1.76	2.11	1.59	3.60	1.98	2.44
1944.....	9.82	1.99	2.35	1.64	3.51	2.07	2.53
1946.....	10.75	2.16	2.58	1.82	3.97	2.58	2.85
South Central:							
1941.....	10.63	1.64	-	1.14	2.34	1.28	2.15
1942.....	10.63	1.86	2.08	1.28	2.52	1.24	2.17
1943.....	10.96	2.03	2.19	1.39	2.90	1.56	2.44
1944.....	11.77	2.32	2.49	1.44	2.85	1.61	2.45
1946.....	12.64	2.44	2.67	1.48	3.16	1.77	2.80
North Atlantic:							
1941.....	8.61	1.42	-	1.08	3.00	1.50	2.25
1942.....	8.83	1.64	1.84	1.25	3.00	2.00	3.00
1943.....	9.95	2.11	2.50	1.77	2.52	1.58	2.00
1944.....	11.02	2.36	2.75	1.70	2.91	2.11	3.50
1946.....	12.84	2.71	3.18	2.21	3.28	2.90	4.32
South Atlantic:							
1941.....	11.85	1.64	-	1.25	2.44	1.10	3.00
1942.....	11.48	1.95	2.50	1.50	2.94	.97	3.00
1943.....	11.31	2.16	2.00	1.11	2.91	1.73	2.50
1944.....	12.17	2.42	3.00	1.27	3.08	1.50	3.30
1946.....	13.53	2.96	3.25	1.57	3.26	1.85	3.45
UNITED STATES:							
1941.....	9.76	1.30	-	1.11	2.59	1.39	2.10
1942.....	9.86	1.49	1.71	1.18	2.82	1.41	2.21
1943.....	10.13	1.65	1.87	1.27	3.15	1.68	2.40
1944.....	10.48	1.81	2.08	1.30	3.18	1.78	2.57
1946.....	11.38	2.01	2.37	1.47	3.41	2.07	2.90

^aSurvey made July 1, 1944.

Grinding charges increased 32 percent, with a high of 105 percent increase in the North Atlantic States and a low of 21 percent increase in the North Central States. Curing charges also increased 32 percent with the greatest increase in the West, and the least in the North. Smoking charges increased 50 percent, with the greatest rise in North Atlantic and Western States and the smallest in the South Central States. Lard-rendering rates rose 38 percent, most in the North and South Atlantic States and least in the North and South Central States.

In general, the highest locker-rental and processing rates, as well as the highest percentage increases, were found in the areas of new locker-plant development. Increased construction costs and the absence of established rates encouraged these high rates. In the areas of earlier development, as the North Central and Western States, investment costs were less, competition greater, and OPA ceilings well-established.

LOCKER RENTAL RATES

Table 21 shows in detail the average annual locker rental rate and major processing charges by States and regions as of January 1, 1946. Locker rental rates averaged \$11.38 per year and ranged from \$7.86 per locker in Washington to \$16.52 in Arizona. In general, the plants of the Western States had the lowest rates. Furthermore, many plants in Oregon, Washington, Idaho, and Colorado have lockers larger than the standard 6-cubic-foot size. This makes the difference in rates between these and other States even more significant. The average size of lockers as reported by the Oregon plants is 9.8 cubic feet. At the present rental rate of \$8.09 the cost of locker storage in this State is approximately \$0.83 per cubic foot per year. Exclusive of these Western States the locker rental rate for the great majority of the plants averages approximately \$2.00 per cubic foot per year.

The States with the highest rental charges are usually those of recent locker-plant development. Arizona, Nevada, Connecticut, Rhode Island, and Florida report average rental charges in excess of \$15.00 per locker. Other States with high rental rates are California, New Mexico, Louisiana, Maine, Massachusetts, and North Carolina.

States with low rental rates are generally in the North Central and Western States. Outside these regions are Oklahoma, New Jersey, Pennsylvania, Vermont, and Virginia with relatively low rates.

RATES FOR CUTTING, WRAPPING, AND FREEZING

The rate for cutting, wrapping, and freezing (including chilling) averaged \$2.01 per 100 pounds and ranged from \$1.43 in Minnesota to \$5.00 in Rhode Island. Differences in this rate vary closely with locker rental rates and are found to be highest in States of recent locker development. Reports indicate that cut, wrap, and freeze rates are lowest in the North Central and Western States - \$1.74 and \$2.16 per 100 pounds - and highest in the North Atlantic and South Atlantic States - \$2.71 and

Table 21. - Average locker rental and processing rates, by States and regions, January 1, 1946.

STATE AND REGION	PROCESSING RATE PER HUNDRED POUNDS FOR							
	AVERAGE ANNUAL LOCKER RENTAL RATE	CUT, WRAP, AND FREEZE	CUT, WRAP, GRIND, AND FREEZE	GRIND	CURE	SMOKE	RENDER LARD	PROCESS, WRAP, AND FREEZE FISH
North Central States:								
Illinois.....	\$12.23	\$2.00	\$2.02	\$1.29	\$3.26	\$1.69	\$2.82	\$2.26
Indiana.....	12.49	2.17	2.52	1.18	3.52	1.76	2.68	2.67
Iowa.....	10.86	1.58	1.76	1.21	3.49	2.02	2.71	2.00
Kansas.....	10.60	1.88	1.98	1.22	3.44	1.50	2.58	2.33
Michigan.....	13.00	2.31	2.52	1.75	3.20	2.43	3.07	2.76
Minnesota.....	10.43	1.43	1.85	1.23	3.48	1.90	2.48	1.98
Missouri.....	12.14	1.92	2.11	1.25	3.06	1.74	3.00	2.32
Nebraska.....	10.40	1.71	1.86	1.20	3.68	1.67	2.47	1.87
North Dakota.....	10.64	1.58	1.93	1.41	3.54	2.03	3.60	1.72
Ohio.....	12.73	2.40	2.47	1.41	3.37	2.07	2.84	2.40
South Dakota.....	10.87	1.62	1.92	1.25	3.59	1.92	2.96	1.82
Wisconsin.....	9.51	1.73	1.96	1.28	2.94	2.06	3.10	2.21
Average.....	11.04	1.74	2.06	1.28	3.35	1.93	2.79	2.17
Western States:								
Arizona.....	16.52	4.00	3.25	-	3.33	1.50	4.33	4.00
California.....	14.08	2.48	3.13	2.39	4.29	2.99	2.93	3.49
Colorado.....	11.20	2.21	2.32	1.32	3.41	2.27	2.41	2.58
Idaho.....	10.36	2.09	2.31	1.85	3.36	1.43	3.00	2.72
Montana.....	11.37	1.84	2.06	1.63	3.95	1.90	2.57	1.94
Nevada ^a	16.25	-	4.00	2.00	-	-	-	4.00
New Mexico.....	14.94	2.94	2.75	2.00	3.75	2.10	3.60	4.07
Oregon.....	8.09	2.02	2.41	1.59	4.12	2.28	2.70	2.33
Utah.....	11.15	2.20	2.37	1.50	4.33	3.38	2.80	2.62
Washington.....	7.86	1.97	2.34	1.71	4.07	2.81	3.11	1.67
Wyoming.....	12.82	2.02	2.83	1.60	3.00	2.36	3.00	1.90
Average.....	10.75	2.16	2.58	1.82	3.97	2.58	2.85	2.91
South Central States:								
Alabama.....	12.86	2.70	3.10	1.57	3.06	1.50	2.82	2.75
Arkansas.....	12.64	2.87	2.87	1.78	3.96	1.78	4.50	3.24
Kentucky.....	13.58	2.73	2.73	1.62	3.50	2.00	2.92	2.85
Louisiana.....	14.94	4.00	3.50	2.00	3.20	1.50	4.00	4.33
Mississippi.....	12.53	2.67	2.88	2.50	2.99	1.21	2.80	3.38
Oklahoma.....	11.30	2.01	2.27	1.32	3.45	2.41	3.07	2.62
Tennessee.....	12.25	2.27	2.32	1.60	4.08	2.00	3.00	2.55
Texas.....	12.96	2.43	2.70	1.28	2.91	1.76	2.45	2.95
Average.....	12.64	2.44	2.67	1.48	3.16	1.77	2.80	2.93
North Atlantic States:								
Connecticut.....	15.97	2.62	2.25	2.20	3.33	2.33	-	2.33
Maine ^a	14.25	3.00	-	1.50	3.00	2.00	4.00	4.50
Massachusetts.....	14.79	3.38	2.50	2.29	3.71	4.33	-	3.14
New Hampshire.....	13.89	3.00	3.00	2.32	3.33	2.81	4.67	2.75
New Jersey.....	11.12	3.25	3.50	1.77	5.00	5.00	-	2.62
New York.....	13.40	2.91	3.59	2.53	2.91	2.62	5.36	4.20
Pennsylvania.....	12.09	2.13	2.98	1.98	3.33	2.68	3.38	2.53
Rhode Island.....	15.45	5.00	-	3.00	-	-	-	3.50
Vermont.....	11.52	2.50	3.50	1.73	3.75	3.50	4.00	2.93
Average.....	12.84	2.71	3.18	2.21	3.28	2.90	4.32	3.10
South Atlantic States:								
Florida.....	16.19	3.43	3.00	1.94	3.08	1.80	3.10	3.60
Georgia.....	13.32	2.76	3.75	1.52	2.96	1.66	3.42	2.51
Maryland.....	12.98	2.70	3.00	1.36	4.00	1.00	3.00	3.85
North Carolina.....	14.12	2.93	2.72	1.36	3.11	1.92	3.50	2.56
South Carolina.....	13.47	3.71	4.10	1.71	3.38	2.22	3.86	3.62
Virginia.....	12.29	2.70	2.50	1.54	4.50	2.00	3.50	2.88
West Virginia ^a	15.01	-	2.50	2.00	-	-	-	-
Average.....	13.53	2.96	3.25	1.57	3.28	1.85	3.45	3.04
UNITED STATES.....	\$11.38	\$2.01	\$2.37	\$1.47	\$3.41	\$2.07	\$2.90	\$2.49

^aOnly one plant reported.

\$2.96 per 100 pounds. The most frequent rates charged for this service were between 1.6 cents and 2.0 cents per pound (table 22).

Rate for cutting, wrapping, freezing, and grinding averaged \$2.37 per 100 pounds and varied with the cutting, wrapping, and freezing rate. The highest average rate was reported from South Carolina, \$4.10 per 100 pounds. The lowest average rate was found in Iowa, \$1.76 per 100 pounds.

It was found that the plants that included the charge for grinding with those for cutting, wrapping, and freezing averaged approximately 10 cents more income per 100 pounds of carcass weight than the plants making a separate charge for this service. Detailed studies indicate that plants in the North Central States grind from 15 to 20 pounds out of each 100 pounds of meat handled. On an average of $17\frac{1}{2}$ pounds, the income from grinding would be 26 cents. Added to the income of \$2.01 from cutting, wrapping, and freezing the plant operator receives a total of \$2.27, or 10 cents less than the combined average rate of \$2.37 per 100 pounds.

GRINDING

Grinding rates averaged \$1.47 per 100 pounds and ranged from \$1.18 in Indiana to \$3.00 in Rhode Island. Generally the lowest rates were found in the North Central States and highest in the North Atlantic States.

CURING

Curing rates averaged \$3.41 per 100 pounds cured and were highest in the Western States (see also table 22). Four States in this region charged over \$4.00 for this service and the remaining States, over \$3.00. Rates in the South Atlantic and South Central States were lowest - \$3.26 and \$3.16 per 100 pounds, respectively. The Southern areas were also sections of heavy curing.

SMOKING

Smoking rates averaged \$2.07 per 100 pounds and were highest in the North Atlantic States. Rates in this region averaged \$4.32 and ranged from \$5.00 in New Jersey to \$2.00 in Maine. Rates in the South Atlantic and South Central States where they averaged \$1.77 and \$1.85, respectively, were lowest.

RENDERING LARD

The average rate charged for rendering lard by all plants reporting was \$2.90 per 100 pounds. The most common rates were 2 and 3 cents (see table 22). Rendering rates were highest in the North Atlantic States, \$4.32 per 100 pounds; and lowest in the North Central and South Central States, \$2.79 and \$2.80 per 100 pounds.

Table 22. - Number and percentage of frozen-food locker plants charging specified rates for processing services, January 1, 1946.

SERVICE AND RATE (CENTS PER POUND)	NUMBER OF PLANTS HAVING INDICATED RATES						PERCENT- AGE IN EACH RATE GROUP
	NORTH CENTRAL STATES	WESTERN STATES	SOUTH CENTRAL STATES	NORTH ATLANTIC STATES	SOUTH ATLANTIC STATES	UNITED STATES	
Cut, wrap, freeze, and grind:							
1.0 and under.....	19	4	-	-	-	23	2
1.1 - 1.5.....	122	13	7	-	-	142	13
1.6 - 2.0.....	305	78	46	11	4	444	42
2.1 - 2.5.....	75	26	25	7	3	136	13
2.6 - 3.0.....	58	48	77	25	19	227	21
3.1 - 3.5.....	6	12	10	4	5	37	4
3.6 and over.....	7	20	7	13	9	56	5
Total.....	592	201	172	60	40	1,065	100
Cut, wrap, and freeze:							
1.0 and under.....	68	8	3	16	2	97	7
1.1 - 1.5.....	402	61	10	6	-	479	33
1.6 - 2.0.....	297	127	52	20	6	502	35
2.1 - 2.5.....	53	39	16	9	6	123	8
2.6 - 3.0.....	30	50	50	42	33	205	14
3.1 - 3.5.....	-	4	3	1	3	11	1
3.6 and over.....	4	6	3	8	8	29	2
Total.....	854	295	137	102	68	1,446	100
Grind:							
0.5 and under.....	30	8	-	-	2	40	2
0.6 - 1.0.....	603	101	97	15	29	845	55
1.1 - 1.5.....	102	28	9	5	7	151	10
1.6 - 2.0.....	175	97	41	47	24	384	25
2.1 - 2.5.....	2	2	4	2	-	10	1
2.6 and over.....	18	47	11	32	6	114	7
Total.....	930	283	162	101	68	1,544	100
Cure:							
1.0 and under.....	11	1	8	7	2	29	2
1.1 - 2.0.....	133	10	43	6	9	201	17
2.1 - 3.0.....	295	71	81	47	42	436	45
3.1 - 4.0.....	122	45	31	11	8	217	18
4.1 - 5.0.....	107	37	19	13	5	181	15
5.1 and over.....	12	21	4	2	1	40	3
Total.....	680	185	186	86	67	1,204	100
Smoke:							
1.0 and under.....	205	26	61	1	10	303	29
1.1 - 2.0.....	345	67	68	48	27	555	53
2.1 - 3.0.....	44	34	16	14	3	111	10
3.1 and over..	33	25	4	17	2	81	8
Total.....	627	152	149	80	42	1,050	100
Render lard:							
1.0 and under.....	44	10	14	-	3	71	9
1.1 - 2.0.....	166	24	32	2	2	226	30
2.1 - 3.0.....	188	28	36	7	16	275	37
3.1 and over.....	85	22	25	25	19	176	24
Total.....	483	84	107	34	40	748	100

PROCESSING FISH

Rates for processing, wrapping, and freezing fish are included for the first time in this survey because of increased demand for this information. The rate for this service averaged \$2.49 per 100 pounds. In a great many instances, the individual reports showed the same rate for fish processing as for cutting, wrapping, and freezing meat.

RATES AND OWNERSHIP

Table 23 shows average processing rates as of January 1, 1946, by type of ownership. In general, the corporately owned plants had the highest charges and the cooperatively owned plants the lowest.

Table 23. - Average processing rates by type of ownership, January 1, 1946.

TYPE OF OWNERSHIP	PROCESSING RATE IN CENTS PER POUND FOR						FREEZING FRUITS AND VEGETABLES			PROCESSING, PACKING, AND FREEZING FRUITS AND VEGETABLES		
	CUT, WRAP, AND FREEZE	CUT, WRAP, GRIND, AND FREEZE	GRIND	CURE	SMOKE	RENDER LARD	CENTS PER POUND	CENTS PER PINT	CENTS PER QUART	CENTS PER POUND	CENTS PER PINT	CENTS PER QUART
Individual.	1.95	2.29	1.47	3.46	2.02	2.89	1.81	1.82	2.86	2.63	2.21	3.44
Cooperative	1.92	2.24	1.33	3.19	1.75	2.82	1.98	1.76	2.75	3.04	3.10	3.97
Partnership	2.08	2.38	1.46	3.42	2.18	2.78	1.76	1.76	2.82	2.60	2.47	4.00
Corporation	2.20	2.72	1.62	3.42	2.39	3.16	1.60	1.57	2.57	3.20	2.85	3.62
Average..	2.01	2.37	1.47	3.41	2.07	2.90	1.77	1.77	2.81	2.76	2.48	3.67

Corporate plants averaged \$2.72 per 100 pounds for the major service of cutting, wrapping, freezing, and grinding, or 48 cents more than the \$2.24 average for the cooperatives. Rates for rendering lard averaged \$3.16 per 100 pounds for the corporate plants and \$2.78 for the partnership plants. Curing charges were highest in the individually owned plants, \$3.46 per 100 pounds, and lowest in the cooperative plants, \$3.19 per 100 pounds.

Little reason can be found for the variations in rates between the various ownership groups, other than the willingness or ability of the plant operators to establish either higher or lower rates.

KILLING AND PROCESSING POULTRY

Table 24 shows the average rates by States and regions for killing and processing fryers, hens, and turkeys by the head, and for processing fryers, hens, and turkeys by the head and by the pound. The average rate for killing and processing fryers was 18.5 cents per head and ranged from 11.7 cents per head in North Carolina to 30 cents in Vermont. The South Central and South Atlantic States had the lowest rates,

Table 24. - Average rates for killing and processing poultry, by States and regions, January 1, 1946.

STATE AND REGION	KILL AND PROCESS PER BIRD ^a			PROCESS ONLY					
	CENTS PER FRYER	CENTS PER HEN	CENTS PER TURKEY	FRYERS		HENS		TURKEYS	
				CENTS PER BIRD	CENTS PER POUND	CENTS PER BIRD	CENTS PER POUND	CENTS PER BIRD	CENTS PER POUND
North Central States:									
Illinois.....	21.4	22.4	54.2	6.8	2.2	7.4	2.1	24.2	2.1
Indiana.....	16.4	18.5	46.5	7.2	2.5	8.3	2.4	21.7	2.4
Iowa.....	18.6	17.6	52.1	7.5	2.0	7.7	1.9	20.1	1.9
Kansas.....	17.5	18.3	47.5	5.7	1.9	5.5	1.8	18.8	1.8
Michigan.....	25.5	25.4	47.6	13.0	2.3	13.9	2.3	26.7	2.3
Minnesota.....	17.0	17.0	34.3	6.4	1.8	6.8	1.8	14.2	1.7
Missouri.....	17.3	18.3	43.5	5.4	2.0	5.9	2.0	18.3	2.0
Nebraska.....	16.6	16.2	33.3	5.3	1.8	5.5	1.8	15.9	1.9
North Dakota.....	19.3	19.3	42.5	10.6	1.5	10.6	1.6	19.4	1.6
Ohio.....	19.4	18.9	47.1	7.0	2.1	7.0	2.1	12.5	2.1
South Dakota.....	20.5	19.5	56.0	7.4	1.7	7.5	1.7	20.6	1.7
Wisconsin.....	17.8	18.8	40.5	8.5	2.0	9.4	1.9	19.8	1.8
Average.....	19.0	19.3	44.5	7.5	2.0	8.2	2.0	19.8	2.0
Western States:									
Arizona.....	25.0	25.0	75.0	5.0	2.0	8.8	1.5	16.2	1.7
California.....	26.5	26.4	60.2	7.6	2.2	8.4	2.3	23.8	2.4
Colorado.....	20.8	25.0	49.8	7.5	2.0	6.0	1.9	15.0	1.9
Idaho.....	20.0	20.0	35.0	5.0	2.8	5.0	2.8	-	2.8
Montana.....	18.6	20.0	35.0	20.0	1.6	20.0	1.6	25.0	1.6
Nevada.....	-	-	-	5.0	-	5.0	-	25.0	-
New Mexico.....	22.5	27.5	55.0	5.0	3.0	10.0	3.0	-	2.4
Oregon.....	15.0	15.0	25.0	12.0	3.0	14.0	3.0	26.0	3.0
Utah.....	25.0	25.0	50.0	10.0	2.2	15.0	2.0	25.0	1.8
Washington.....	25.0	25.0	42.5	12.5	1.0	14.2	-	30.0	-
Wyoming.....	25.0	25.0	-	5.0	1.7	5.0	1.8	10.0	1.8
Average.....	23.3	24.7	52.3	8.6	2.1	9.8	2.1	22.5	2.1
South Central States:									
Alabama.....	13.5	15.4	50.0	6.2	2.5	10.0	3.2	26.0	2.8
Arkansas.....	18.9	19.4	49.4	5.0	2.6	7.5	2.6	33.8	2.5
Kentucky.....	12.5	15.7	35.8	-	2.6	-	2.7	-	2.7
Louisiana.....	18.8	20.0	52.5	10.0	4.0	12.5	4.0	25.0	3.7
Mississippi.....	12.2	18.0	42.0	6.7	3.0	15.0	2.7	28.3	2.6
Oklahoma.....	11.8	13.0	31.1	5.0	2.0	6.7	2.0	21.4	2.1
Tennessee.....	12.5	17.5	25.0	7.5	2.0	10.0	2.0	12.5	2.0
Texas.....	15.3	17.9	44.3	6.2	2.5	7.9	2.5	21.7	2.5
Average.....	14.6	17.0	43.4	6.0	2.4	8.0	2.5	23.0	2.5
North Atlantic States:									
Connecticut.....	-	-	-	15.0	1.7	16.7	1.7	20.0	1.7
Maine.....	-	-	-	-	3.5	-	3.5	-	3.5
Massachusetts.....	15.0	15.0	20.0	11.2	4.0	11.2	4.0	17.5	4.0
New Hampshire.....	18.3	18.3	30.0	15.0	3.8	15.0	3.7	30.0	3.7
New Jersey.....	20.0	20.0	75.0	-	2.5	-	2.6	25.0	2.3
New York.....	25.4	25.8	61.4	15.4	3.0	16.1	3.0	42.2	3.0
Pennsylvania.....	23.3	23.8	53.8	15.0	2.3	15.0	2.3	34.8	2.4
Vermont.....	30.0	30.0	60.0	13.0	2.6	12.5	2.5	23.8	2.5
Average.....	23.4	23.7	56.0	14.6	2.8	15.1	2.8	35.0	2.8
South Atlantic States:									
Florida.....	21.7	23.3	50.0	10.0	2.7	10.0	2.8	25.0	2.7
Georgia.....	13.8	13.8	44.4	5.4	2.9	7.7	2.6	15.0	2.1
Maryland.....	20.0	22.5	62.5	12.5	3.1	12.5	3.0	25.0	3.0
North Carolina.....	11.7	13.3	50.0	5.0	2.2	-	2.3	-	2.3
South Carolina.....	13.3	16.7	73.0	5.0	2.8	10.0	2.8	30.0	2.8
Virginia.....	19.2	20.0	47.5	10.0	1.9	10.0	1.9	25.0	1.9
West Virginia.....	-	-	-	-	2.0	-	2.0	-	2.0
Average.....	15.8	16.8	50.7	7.0	2.6	8.9	2.6	20.0	2.5
UNITED STATES.....	18.5	19.5	46.0	7.9	2.2	8.9	2.2	22.3	2.2

^aIn a few States the average rate for killing and processing appears out of line with the rate for processing only by the head. This is due to the limited number of reports with complete poultry processing data from those States and the effect of one report on the State average. The majority of the plants reported a head charge for killing and processing. A few, however, had a head charge for killing and a poundage charge for processing. Those plants splitting their charges on a head and poundage basis were eliminated from the analysis.

14.6 cents and 15.8 cents, respectively. Rates were generally highest in the North Atlantic and the Western States, 23.4 cents and 23.3 cents, respectively. Those regions with the lowest rates - South Central and South Atlantic - are the regions of heavy poultry volume in locker plants.

The charge for killing and processing hens averaged 19.5 cents per head, or 1 cent more than the charge for fryers. In general, the charge for killing and processing hens varied among the States and regions with the charge made for fryers. Only in the South Central States did the difference average more than 2 cents per pound.

The charge for killing and processing turkeys averaged 46 cents per head and ranged from 20 cents in Massachusetts to 75 cents in Arizona and New Jersey. These extreme rates result, however, from only one plant reporting rates from each of the three States. On a regional basis the North Atlantic States had the highest average rate of 56 cents per head and the South Central States had the lowest, 43.4 cents per head. Three States reported average rates of less than 30 cents per head, 7 States from 30 to 40 cents, 14 States from 40 to 50 cents, 10 States from 50 to 60 cents, and 7 States 60 cents and over.

A few reports showed that plant operators charged on a head basis for killing and a weight basis for processing. The plants splitting their charges in such a manner were dropped from the analysis.

PROCESSING ONLY

Charges for processing only (cut, wrap, and freeze) are made either on a head or a pound basis. For this reason data were secured on the two methods of charging. The average for those plants charging on a per-pound basis was the same for fryers, hens, and turkeys. In a great many instances, the rate was the same as the rate for beef and pork processing.

Charges on a per-head basis for processing only averaged 7.9 cents for fryers, 8.9 cents for hens, and 22.3 cents for turkeys. Highest rates were again found in the North Atlantic States and lowest in the South Central and South Atlantic States.

FRUITS AND VEGETABLES

The processing and freezing of fruits and vegetables are still rather minor sources of income to locker plants. The demand for such service is increasing, however, as patrons and plant operators become more proficient in them and as more equipment and supplies for processing and packaging become available.

Table 25 shows rates charged for freezing only and for processing, packaging, and freezing fruits and vegetables by the pound, pint, and quart

Table 25. - Average rates for processing and freezing fruits and vegetables, North Central States and by regions, January 1, 1946^a.

STATE AND REGION	FREEZE FRUITS AND VEGETABLES			PROCESS, PACKAGE, AND FREEZE FRUITS AND VEGETABLES		
	PER POUND	PER PINT	PER QUART	PER POUND	PER PINT	PER QUART
North Central States:	Cents					
Illinois.....	2.25	1.94	3.05	3.25	2.54	3.45
Indiana.....	1.99	2.13	3.35	3.50	3.73	5.72
Iowa.....	2.03	1.90	2.77	2.23	2.15	3.05
Kansas.....	1.37	1.38	2.38	1.82	1.70	3.14
Michigan.....	2.02	1.85	2.72	3.10	3.00	3.50
Minnesota.....	2.11	1.78	2.88	2.77	1.92	3.16
Missouri.....	1.78	1.81	2.88	2.28	2.21	3.03
Nebraska.....	1.53	1.52	2.48	2.72	1.88	2.58
North Dakota.....	2.18	1.87	2.78	2.50	1.75	2.78
Ohio.....	1.38	1.38	2.14	2.80	2.21	3.31
South Dakota.....	1.85	2.04	3.50	2.23	2.71	4.00
Wisconsin.....	1.74	1.71	2.57	2.57	1.83	3.25
North Central States.....	1.81	1.79	2.80	2.57	2.27	3.38
Western States.....	1.38	(b)	(b)	2.42	(b)	(b)
South Central States.....	1.98	1.93	3.09	2.99	3.21	4.78
North Atlantic States.....	1.83	1.78	2.58	2.98	2.50	2.90
South Atlantic States.....	1.85	1.86	2.91	3.88	3.98	5.11
UNITED STATES.....	1.77	1.77	2.81	2.76	2.48	3.67

^aRates by States shown only for the North Central States. Reports from other States were too few to insure reliability, therefore, regional averages only are shown.

^bReliability of data uncertain.

Table 26. - Number and percentage of frozen-food locker plants charging specified rates for freezing (only) and processing, packing, and freezing fruits and vegetables, January 1, 1946.

SERVICE AND RATE (CENTS PER POUND)	NUMBER OF PLANTS IN AREA CHARGING INDICATED RATES						PERCENT-AGE IN EACH RATE GROUP
	NORTH CENTRAL STATES	WESTERN STATES	SOUTH CENTRAL STATES	NORTH ATLANTIC STATES	SOUTH ATLANTIC STATES	UNITED STATES	
Freezing (only):							
1.0 and under.....	175	118	40	35	18	384	35
1.5.....	66	18	14	11	3	112	10
2.0.....	230	40	74	62	20	426	39
2.5.....	13	6	8	-	3	30	3
3.0.....	49	7	28	17	8	109	10
3.5 and over.....	21	2	5	2	7	37	3
Total.....	554	189	169	127	59	1,098	100
Processing, packing, and freezing:							
2.0 and under.....	113	24	27	13	5	182	58
2.5.....	4	2	3	-	4	13	4
3.0.....	22	3	17	5	2	49	16
3.5.....	-	-	-	-	-	-	-
4.0.....	11	3	-	3	3	20	6
4.5.....	-	-	-	-	-	-	-
5.0.....	14	1	3	1	4	23	7
5.5 and over.....	8	3	9	2	5	27	9
Total.....	172	36	59	24	23	314	100

in each of the North Central States and averages for each of the other regions. Insufficient reports were received for the Western, South Central, North Atlantic, and South Atlantic States to insure reliability of the data on a State basis.

It was found that rates for freezing fruits and vegetables averaged 1.77 cents per pound and pint and 2.81 cents per quart. Rates for processing, packaging, and freezing averaged 2.76 cents per pound, 2.48 cents per pint, and 3.67 cents per quart for the United States. Table 26 shows the frequency with which the various rates were charged.

PRODUCTS PROCESSED PER LOCKER RENTED

The quantities and kinds of food processed per locker are probably the most significant data reported in the survey. The study showed that an average of 353 pounds of food was processed per locker for the year 1945 as compared with 382 pounds shown by the survey for 1942, and 360 pounds for 1941 (see table 27). While only those plants furnishing reasonably complete data on poundage handled were included in this analysis, it should be kept in mind that the breakdown between commodities frequently depends upon operators' estimates.

Table 27. - Average number of pounds chilled, cut, wrapped, or frozen per locker rented, 1941-45.

YEAR ^a	AVERAGE POUNDS OF PRODUCTS PROCESSED EACH YEAR							TOTAL
	BEEF AND VEAL	PORK	LAMB	POULTRY	GAME	FRUITS	VEGETABLES	
1941.....	169	165	(b)	14	(b)	6	6	360
1942.....	171	153	(b)	10	16	18	14	382
1943-44.....	148	141	(b)	15	9	16	13	342
1945.....	163	135	4	15	12	13	11	353

^aperiods covered by the four surveys.

^bProbably included in beef and veal.

Also these averages are based on the number of lockers rented at the close of the year. The pounds per locker might be higher if the number of lockers rented were based on the average rented throughout the year. The active demand for lockers during the period covered by the survey, however, and the nearly 100 percent of occupancy throughout the year seem to indicate but little difference between average yearly occupancy and that reported at the end of the year.

Other factors to be kept in mind are: (1) That fruits and vegetables are often put in the locker without going through the plant records, so that the actual poundage of these products is probably higher than the average pounds shown in table 28. This is particularly true of the older plants on the Pacific coast. (2) The pork chilled includes all pork that went through the curing department as well as that stored in fresh-frozen form; hence, the 65 pounds of pork cured (table 29) is not in addition to the 135 pounds chilled and cut.

Table 28. - Average number of pounds chilled, cut, wrapped, or frozen per locker rented, by States and regions, 1945.

STATE AND REGION	AVERAGE POUNDS OF PRODUCTS PROCESSED IN EACH STATE						
	BEEF	PORK	LAMB	POULTRY	GAME	FRUITS	VEGETABLES
North Central States:							
Illinois.....	198	170	2	16	3	17	12
Indiana.....	222	139	2	14	3	9	12
Iowa.....	179	212	1	11	4	13	9
Kansas.....	150	105	2	11	3	24	13
Michigan.....	173	142	4	12	7	18	13
Minnesota.....	186	251	2	12	9	9	8
Missouri.....	132	72	2	20	2	14	8
Nebraska.....	178	131	3	10	4	15	8
North Dakota.....	287	199	2	7	7	3	3
Ohio.....	148	79	2	17	3	14	16
South Dakota.....	185	165	2	11	55	6	7
Wisconsin.....	152	211	3	16	8	17	9
Average.....	178	166	2	14	8	14	10
Total plants reporting	830	816	360	632	457	517	493
Western States:							
Arizona.....	326	97	4	20	25	5	5
California.....	151	74	9	10	12	9	10
Colorado.....	120	115	3	4	32	6	5
Idaho.....	168	67	4	6	41	17	16
Montana.....	128	125	4	4	20	14	13
Nevada.....	161	18	9	15	6	3	3
New Mexico.....	281	71	2	11	15	4	4
Oregon.....	84	22	2	2	17	21	13
Utah.....	107	61	4	6	31	6	12
Washington.....	132	45	2	6	11	28	23
Wyoming.....	100	90	3	5	49	5	3
Average.....	139	69	6	8	20	11	11
Total plants reporting	256	246	159	162	197	114	106
South Central States:							
Alabama.....	150	366	4	11	3	13	9
Arkansas.....	111	107	10	14	10	10	10
Kentucky.....	128	70	3	14	1	9	9
Louisiana.....	111	228	-	29	-	7	11
Mississippi.....	123	170	4	20	2	21	24
Oklahoma.....	139	90	1	17	2	7	6
Tennessee.....	90	66	3	44	1	18	9
Texas.....	222	185	3	21	11	13	10
Average.....	165	149	3	20	7	12	10
Total plants reporting	155	150	82	137	80	99	104
North Atlantic States:							
Connecticut.....	94	36	8	66	2	7	23
Maine.....	315	131	-	40	15	-	30
Massachusetts.....	137	58	2	28	5	13	15
New Hampshire.....	187	155	3	23	3	8	8
New Jersey.....	199	63	3	20	-	29	13
New York.....	172	88	6	41	4	18	22
Pennsylvania.....	113	50	6	22	30	12	20
Rhode Island.....	100	50	6	50	-	-	-
Vermont.....	134	107	4	21	3	10	45
Average.....	143	73	5	29	17	14	20
Total plants reporting	79	77	55	72	53	53	60
South Atlantic States:							
Florida.....	169	668	-	5	2	3	2
Georgia.....	191	307	3	32	3	18	16
Maryland.....	133	62	8	32	3	11	15
North Carolina.....	187	224	2	9	1	27	22
South Carolina.....	112	182	1	44	1	20	9
Virginia.....	81	44	6	31	1	11	15
West Virginia.....	164	80	-	10	3	-	-
Average.....	144	181	5	28	2	17	16
Total plants reporting	48	48	28	43	17	32	28
UNITED STATES AVERAGE.	163	135	4	15	12	13	11
Total plants reporting	1,368	1,337	684	1,046	804	815	791

Table 29. - Pounds of pork cured, fruits and vegetables frozen for sale, and commercial products sold per locker rented in 1945.

STATE AND REGION	POUNDS OF PRODUCTS PER LOCKER RENTED							
	PORK CURED	FROZEN FOR SALE		COMMERCIAL PACK SOLD		FISH AND SEA FOOD	PACK- ERS' BEEF	PACK- ERS' PORK
		FRUITS	VEGE- TABLES	FRUITS	VEGE- TABLES			
North Central States:								
Illinois.....	69	10	1	7	4	7	37	34
Indiana.....	72	-	-	4	6	4	5	1
Iowa.....	59	9	2	21	5	9	9	7
Kansas.....	41	40	2	10	8	7	3	2
Michigan.....	51	10	6	4	3	5	8	5
Minnesota.....	53	2	-	3	2	8	13	23
Missouri.....	42	3	-	3	5	8	22	30
Nebraska.....	31	2	2	8	3	7	13	10
North Dakota.....	32	1	(a)	1	-	6	11	9
Ohio.....	38	13	52	3	3	9	10	3
South Dakota.....	34	1	1	6	8	7	12	6
Wisconsin.....	44	42	70	28	12	8	13	10
Average.....	54	19	22	11	5	8	14	12
Total plants reporting..	332	44	17	129	98	162	72	45
Western States:								
Arizona.....	36	-	-	2	8	9	13	-
California.....	72	5	5	13	41	3	34	13
Colorado.....	42	14	-	1	1	2	9	5
Idaho.....	33	-	-	-	-	3	10	10
Montana.....	69	-	-	4	6	8	11	14
Nevada.....	-	-	-	-	-	-	-	-
New Mexico.....	44	-	-	-	-	-	4	-
Oregon.....	19	3	-	50	3	1	-	-
Utah.....	27	-	-	1	2	-	10	3
Washington.....	16	-	-	2	3	3	41	8
Wyoming.....	15	-	-	-	-	17	48	15
Average.....	52	6	5	24	14	4	26	11
Total plants reporting..	79	7	3	20	20	22	30	22
South Central States:								
Alabama.....	278	7	1	-	-	16	-	-
Arkansas.....	96	3	-	4	4	5	27	19
Kentucky.....	39	5	2	3	3	9	12	2
Louisiana.....	80	-	-	-	-	-	-	-
Mississippi.....	167	-	-	1	1	9	9	5
Oklahoma.....	30	-	4	8	3	8	3	2
Tennessee.....	80	6	3	1	1	7	2	3
Texas.....	120	1	(a)	12	7	8	26	6
Average.....	117	4	2	7	5	8	15	5
Total plants reporting..	83	12	7	19	18	25	17	16
North Atlantic States:								
Connecticut.....	-	-	-	-	-	-	-	-
Maine.....	-	-	-	5	5	4	-	-
Massachusetts.....	28	2	-	3	6	5	-	-
New Hampshire.....	92	2	2	5	8	6	52	8
New Jersey.....	52	-	-	-	-	-	-	-
New York.....	39	-	(a)	4	5	3	14	12
Pennsylvania.....	14	3	7	1	17	5	15	14
Rhode Island.....	-	-	-	2	3	-	-	-
Vermont.....	39	32	-	21	15	5	40	37
Average.....	43	5	3	7	10	4	21	16
Total plants reporting..	30	8	5	30	30	29	11	8
South Atlantic States:								
Florida.....	605	1	(a)	-	-	200	-	-
Georgia.....	202	10	4	19	(a)	-	6	4
Maryland.....	7	-	-	4	5	-	3	-
North Carolina.....	116	-	-	-	-	-	-	-
South Carolina.....	99	-	-	4	8	3	-	-
Virginia.....	42	7	-	(a)	1	(a)	-	-
West Virginia.....	-	-	-	14	14	12	-	-
Average.....	153	8	3	10	7	13	4	4
Total plants reporting..	21	4	2	5	5	4	3	1
UNITED STATES AVERAGE...								
Total plants reporting..	545	75	34	203	171	242	133	92

^aLess than one-half pound.

Some of the significant facts revealed in this table are: (1) Beef processing exceeds that of pork even though the national per capita consumption of pork usually exceeds beef. This greater consumption of beef by locker patrons points to the possible future trend toward increased beef consumption as compared with that of pork. This may exert an influence upon future production of beef, cattle, and hogs. (2) The wide variations between States in pounds of product processed per locker. In North Dakota 39 plants reported an average of 287 pounds of beef processed per locker; whereas, 23 plants in Oregon showed an average of only 84 pounds, and 9 plants in Virginia, 81 pounds per locker.

In volume of pork processed the South Atlantic and North Central regions lead in poundage with several States in the South Central region also high in volume. Eleven plants in Alabama reported an average of 366 pounds per locker, while 18 in Georgia showed 307 pounds. Four plants in Florida out of a total of 11 reporting in the State showed an average of 668 pounds of pork per locker. As contrasted to these relatively high averages, 20 Oregon plants reported only 22 pounds of pork per locker; 51 Washington plants, 45 pounds; 9 Virginia plants, 44 pounds; and 39 Missouri plants, 72 pounds per locker.

These wide variations are the result of several factors, such as: available production, consumer preference, and kind of service offered by locker plants. In areas where locker plants provide a complete service of curing, smoking, and lard rendering the volume of pork handled is much higher than where such services are absent.

Volume of lamb processed was relatively unimportant in all areas, being largest in the Western States.

The pounds of poultry per locker was highest in the North and South Atlantic regions and lowest in the Western States. As compared with the survey of January 1943, poultry volume for the country as a whole increased from 10 to 15 pounds per locker.

The processing of game, as would be expected, is most important in the Western States, although South Dakota in the North Central region reported the highest average of 55 pounds for the country. Another important State is Pennsylvania with an average of 30 pounds per locker. Shortage of ammunition coupled with gas rationing were no doubt limiting factors reducing the average poundage in most areas as compared with former years. Average volume reported on January 1, 1946, was 12 pounds per locker as compared with 16 on January 1, 1943.

Fruits and vegetables frozen for patrons, averaging 24 pounds per locker for the year 1945 is one-third less than the volume of 31 pounds processed in 1942. This still represents only about 7 percent of the total food processed per locker. As mentioned, however, some operators' reports fail to include many pounds of products which move into the lockers direct without going through the sharp freeze.

TRENDS IN THE INDUSTRY

The frozen-food locker industry had a phenomenal growth during the war years. Over half the plants in operation today are less than 4 years old. During the war period locker plants have increased in size, become numerous in States that formerly had no locker service, and increased their service to patrons by diversifying operations to include more food-processing services.

This section is devoted to a discussion of a few of the factors which might affect future locker-plant operation, as well as some of the more important trends in the industry.

HOME UNITS

The increasing popularity of home frozen-food units has aroused much speculation among locker-plant operators as to their possible effect on demand for locker-plant services. Opinion on the subject was divided. Most operators agreed that home units of one type or another would come into more or less general use. Agreement, however, stopped at that point. Some operators predicted that business in their plants would decline, as home units increased in number. Other operators saw the home unit as a supplement to their business from which additional processing revenue could be obtained. Still others foresaw the use of locker plants decline as a facility for the storage of frozen foods and develop into a processing and freezing center serving home units in surrounding trade area.

More recently the general consensus has been that even though there might be some decline in the use of lockers for storage purposes, the resulting loss of income would be more than offset by the increase in income from processing for the home units.

CITY PLANTS

It is estimated that approximately 1,300 frozen-food locker plants are now operating in cities of over 10,000 population. Most of these plants were built during the war years when meat shortages and rationing reduced the supply of available foods in regular outlets and created a big demand for locker storage. With a more plentiful supply of meats in markets and the supply of commercial frozen foods becoming more plentiful, the abnormal demand for lockers in cities may decline. There is also the possibility of more competition from home units. The need for processing services by city patrons is normally not as great as with the farm patron, and the more convenient home unit will probably be sufficient for many city locker patrons.

ADDED SERVICES

The present trend in the industry is toward a more complete line of processing services for the patrons. Many plants are now offering, in addition to meat chilling, cutting, wrapping, freezing, and storing, such other

services as slaughtering, curing, smoking, lard rendering, fruit and vegetable processing and freezing, poultry dressing and freezing, sale of commercial frozen foods and locker supplies, bulk-zero storage and high-temperature egg, fruit, and vegetable storage. A few plants are experimenting with the freezing of poultry, berries, fruits, and vegetables on a semi-commercial scale for sale through local outlets. In some areas groups of plants under one management are centralizing all slaughtering and processing services in one location in order to benefit from the greater efficiency resulting from more volume and the use of labor-saving equipment. These centralized plants plan also to do considerable custom slaughtering and processing for nonlocker patrons such as meat markets, restaurants, and hotels.

Many frozen-food locker plants are in an excellent position to become the central distributing point for home-grown and commercial frozen foods in small towns. Some plant operators are now distributors of commercial frozen foods from whom the retail outlets in the town obtain their frozen-food supply.

One of the more serious problems in the locker-plant industry is that of high-processing costs. Studies of plant operations in the Midwest indicate that, on the average, income from processing barely covers labor costs. When other operating costs are added such as wrapping supplies, depreciation, interest, and power, the processing departments of many plants show a definite loss. Increased volume through centralized processing, service to home units, increased use of lockers by patrons, and improved service to patrons, plus the use of more labor-saving equipment and techniques, will tend to alleviate the problem.

The frozen-food locker industry has now accepted the view of more and better service to the locker patron. Branching out into new fields of food processing, frozen-food locker plants are becoming the central processing, storage, and source of frozen foods in thousands of small towns and rural areas of the country.

Figure 13. • Average rate charged per hundredweight to cut, wrap, freeze, and grind, January 1, 1941-46. (Rate for 1941 estimated, the 1944 survey made as of July 1.)

